Jan $4^{\text {th }} 1856^{\text {th }}$
A clear cold day- $\underline{P}$. $\underline{\text { m }}$. to Walden. To examine the ice
I think it is only such a day as this-when the fields on all side are well clad with snow over which the sun shines brightly, that you observe the blue shadows on the snow- I see a little of it today. Dec $29^{\text {th }}$ there were 8 or 10 acres of Walden still openthat evening it began to snow \& snowed all night-\& the remainder of the pond was frozen on that the succeeding night. But on Jan. first I was surprised to find all the visible ice snow ice-when I expected that only the 8 or 10 acres would be-but it appeared that the weight of the snow had sunk the ice already formed \& then partly dissolved in the water which rose above it \& partly was frozen with it. The whole ice Jan ${ }^{1} 1^{\text {st }}$ was about 6 inches thick-and I should have supposed that over the greater part of the pond there would be a clear ice about 2 inches thick on the lower side-yet where I cut through near the shore I distinguished 2 kinds of ice, the upper $21 / 2$ inches thick \& evidently snow ice, the lower about 4 inches thick \& clearer-yet not remarkably clear-

Some fishermen-had ap. by accident
left 2 of their lines there which were
leading from hole to hole
frozen in. I could see there tracks ^
where they had run-about day before
yesterday-or before the snow-\& their dog
\& the snow was stained with tobacco juice- They had had lines set
with them. ^ They had ap. taken no fish,
in 2 or 3 distant coves
for they had cut no well to put them
in. I cut out the lines, the ice being about
an inch thick around them-\& pulled up
a fine yellow pickerel which would
At first I thought there was none for he was tired of struggling but soon I felt him
weigh 2 lbs or more ${ }^{\wedge}$ - The hook had
caught in the outside of his jaws-\&
the minow hung entire by his side.. It was very cold, \& he struggled but not being able to bend \& quirk his tail
a short time, ${ }^{\wedge}$ in a few minutes became snowy
quite stiff as he lay on the ${ }^{\wedge}$ ice- The water
in his eyes was frozen so that he looked
as if he had been dead a week. About
$15^{1}$ minutes after, thinking ${ }^{2}$ of what I
had heard about fishes coming to life
after being frozen
again ^ on being put into water-I thought
I would try it. This one was to appearance as completely dead as if he had
been frozen a week- I stook him up
on his tail without bending it. I put
him into the water again without re-
The ice melted off \& its eyes looked bright again moving the hook. ^\& after a minute or two was surprised by a sudden convulsive quirk of the fish-and a

[^0]minute or 2 later by another, \& I saw that it would indeed revive \& drew it out again. Yet I do not believe that if it had been frozen solid through \& through that it would have revived-but only when it is superficially frozen-

This reminded me of the pickerel which
I caught here under similar circumstances
for Peter Hutchinson-\& thrust my mittened hands in after-

When I put this pickerel in again after half an hour-it did not revive-but I held it there only 3 or 4 minutes, not long enough to melt the ice which encased it.

Another man had passed since the ${ }^{\wedge}$ snow
fell, \& pulled up at least one of the
lines- I knew it was today \& not yesterday
by the character of his track-for it was stiff
made since the ^ crust formed on this snow last night-a broad depression cracking the crust around-but yesterday, it was comparatively soft \& moist. Hunt says that Mr Hoar
tells a story of Abel Davis to this pur-port- He had once caught a pickerel in the brook near his house-\& was overheard to say-"Why, who'd a thought to find you here in Temple Brook. With a slice of pork you'll make

Rhody (or whatever the name of his wife was)
\& I a good meal." He probably was
not much of a fisherman, \& could hardly contain himself for joy.

It is snapping cold this night ( 10 Pm )
I see the frost on the windows sparkle as
I go through the passage way with a light.

$$
\text { Jan } 5^{\text {th }} \text { ' } 56
$$

One of the coldest mornings Therm. $9^{\circ}{ }^{1}$ say some
P. m. Up river to Hub's Bridge.

It has been trying to snow all day-but has not succeeded, as if it were too coldThough it has been falling all daythere has not been enough to whiten the coat of the traveller. I come to the river for here is the best walkingThe snow is not so deep over the ice. Near the middle the superincumbent snow has so far been converted into a coarse snow-ice iee that it will bear me, though occasionly I slump through intervening water to another ice below-also perhaps the snow has been somewhat blown out of the river valley. At any rate by walking where ${ }^{2}$ the ice was frozen last, or over the channel, I can get along quite comfortably-while it is hard travelling through this crusted snow in the fields.

[^1]Generally to be sure the river is but a white snow-field indistinguishable from the fields-but over the chanel there is a thread, commonly, of yellowish porous looking snow ice- The hard-hack-above the snow has this form

Should not that meadow where the $1^{\text {st }}$ bridge was built Also there are countless be called hard-hack meadow? small ferns with terminal leafet only left on still rising above the snow-for I notice the like the large ones in swamps herbage of the river-side now-thus ${ }^{\wedge}$ that coarse now straw colored grass
 What with the grasses ${ }^{\wedge}$ \& the stems of the button-
bushes-the snow about the button bushes several rods broad
forms often broad ${ }^{1}$ ^ low mounds nearly burying the bushes above which the
\& that broad bladed-now straw colored grass
the tops of the button bushes ${ }^{\wedge}$ still rise many of
with ^ their now black looking balls-erect
The black willows have here and there still a very few little curled \& crispy leaves
or dangling-
is last open
V. The the $27^{\text {ti }}$ inst $\begin{aligned} & \text { The river } \\ & \text { methinks }\end{aligned}$
just below a bend ${ }^{\wedge}$-as now at the bath place \& at clam-shell Hill-\& quite a novel sight is the dark water there- How little locomotive now look the boats whose painted sterns I just detect where they are half filled with ice \& almost completely buried in snow-so neglected by their improvident some frozen in-the ice opening their seams-
owners. some drawn up on the bank

This is not merely improvidence-it is ingratitude
Now and then I hear a sort of creaking twitter maybe from a passing snow bunting. This is the weather for them. I am surprised that nut Mead. Brook has over flowed ${ }^{1}$ its meadow-\& converted it into that coarse yellowish snow ice. Otherwise it had been a broad snowfield

There is a narrow
concealing a little ice under it. thread of open water over its channel
The thin snow now driving from the north \& lodging on my coat-consists of those beautiful star crystals, not cottony \& chubby spokes as on the $13^{\text {th }}$ Dec. but thin \& partly transparent crystals. They are about $1 / 10^{\text {th }}$ of an inch in diameter perfect little wheels with 6 spokes without a tire--or rather with 6 perfect little leafets-fern\& slender like-with a distinct straight ${ }^{\wedge}$ midrib-raying from the center- On each side of each midrib there is a transparent thin blade with a crenate edge-thus凉
How full of the creative genius is the air in which these are generated! I should hardly admire more if real stars fell \& lodged on my coat- Nature is full of genius-full of the divinity-so that not a snow-flake escapes its fashioning hand. Nothing is cheap \& coarseneither dew drops nor snow flakesSoon the storm increases-it was
very
already ${ }^{\wedge}$ severe to face-\& the snow comes
finer more white \& powdery-
this is
Who knows but ^ the original form of all snow flakes-but that when I observe these crystal stars falling around me they are but just generated in the low mist next the earth. I am nearer to the source of the snow-its primal-auroral and golden hour-or infancy- But commonly the flakes reach us travel-worn \& ag-glomerated-comparatively ${ }^{1}$ without order or beauty, far down in their fall.
like men in their advanced age-
As for the circumstances under which
this phenomenon occurs-It is quite cold
V. Mar
$\&$ the driving storm is bitter to face $\{-\}\{-\} 19^{\text {th }}$
though very little snow is falling. It
comes almost horizontally from the north.
Methinks this kind of snow never falls
Yes it does
in any quantity. ^ A divinity must have
stirred within them before the crystals
did thus shoot \& set. Wheels of the
storm chariots- The same law that earth
shapes the ${ }^{\wedge}$ star $^{2}$ shapes the (snow flakeCall it rather) snow-star- As surely as the petals of a flower-are fixed each of these countless snow stars comes whirling thus
to earth with pronouncing ${ }^{\wedge}$ with emphasis the number 6. Order- $\lambda$ of $\mu$ os

This was the beginning of a storm which reached far \& wide \& elsewhere was more severe than here-

[^2]On the Saskatchewan ${ }^{1}$ when no man of science is there to behold still down they come, \& not the less fulfill their destiny, perchance melt at once on the Indian's face- What a world we live in! where myriads of these little disks the so beautiful to ^ most prying eye-are whirled down on every traveller's coat-the observant \& the unobservant-and on the restless fur
squirrel's coat-\& on the far stretchings fields \& forests-the wooded dells-\& the mt tops-far, far away from the haunts of man they roll down some little fall over \& slope $\bar{\Lambda}^{2}$ come to their bearings \& melt or lose their beauty in the mass-ready anon to swell some little rill with their contribution-\& so at last the universal ocean-from which they cameThere they lie like the wreck of chariot wheels after a battle in the skies. Meanwhile the meadow mouse shoves them aside in his gallery-the school boy casts them in his snow ball-or the woodman's sled glides smoothly over them-these glorious spangles-the sweeping of heaven's floor. And they all sing-melting as they sing-of the mysteries of the number 6-six-six-six. He takes up the water of the sea in

[^3]his hand, leaving the salt-he disperses
it in mist through the skies-he
recollects \& sprinkles it like grain in
6-rayed snowy stars over the earth-there
to lie till he dissolves its bonds again.
nests
Found on a young red maple //
near the water in Hub's river side grove-a nest perhaps a size bigger than a sun-yellow birds(no)
\& a little of something like dried hickory ^ blossoms
chiefly of bark shreds-bound \& lined with lint ${ }^{\wedge}$ - It
a little feather yellow at the extremity attached to the outside was on a slanting twig or small branch about 18 feet high \& I shook it down. The rim of fine shreds of grape vine bark chiefly- The outer edged being covered with considerable ${ }^{1}$ of the droppings of the young birds- I thought it the same kind with that found Dec. $30^{\text {th }}$ ult.
Can it be a red start-or is one of the vireo's possibly? which would ac. for the
or a gold finch? yel. tipt feather.
In the blueberry swamp near by, which was
cut down by the ice-another perhaps a little // smaller-of very similar materials but more of the hickory (??) blossoms on the outside beneathbut this was in a nearly upright fork of a red maple about 7 ft high. The little nest of June $26^{\text {th }}$ ' 55 looks like the inside of one of these. Upon these 2 nests found today \& on that of the $30^{\text {th }}$ Dec. I find the same sort of dried catkin (ap not hickory) connected with a little sort of brown bud-may be birch or alder- This makes me suspect they may be all one kind-though the ${ }^{2}$ last was in an upright fork \& had no droppings on it.

## Jan $6^{\text {th }}$

// High wind \& howling \& driving snow storm all night-now much drifted- There is a great drift in the front entry \& at the crack of every door-\& on the window sills. Great drifts on the $S$ of walls-

Clears up at noon-when no $\{$ sta $\}$ vehicle had ${ }^{1}$ passed the house-

Frank Morton has brought home \& I
opened that pickerel of the $4^{\text {th }}$ ult- It is
with smaller between
frozen solid- Yellow spawn as big as a pin head ^ enwraps its insides the whole length $-1 / 2$ an inch thick- It must spawn very early then.
or maw
I find in its gullet or paunch-^ (the long white bag) 3 young perch, one of them 6 inches long-\& the tail of a $4^{\text {th }}-$ \& yet it was caught in endeavoring to large swallow another ^ minnow! Its belly was considerably puffed out. 2 of the perch lay parrallel side by side-of course head downward, in its gullet-(?) ${ }^{2}$ The upper \& largest perch was so high that he was cut in two in the middle in cutting off the head.
This is what you may call voracity.
P. m. to Drifting Cut.
prob
The snow is now ${ }^{\wedge}$ more than a foot deep on a level. While I am making a path to the pump I hear hurried rippling notes of birds, 3 look
// up \& see quite a flock of snow buntings coming to alight amid the currant tops

[^4]in the yard- It is a sound almost as if made with their wings. What a pity our yard was made so tidy in the fall with-rake \& fire-\& we have now no tall crop of weeds rising above this snow to invite these birds.

I am come forth to observe the drifts. inches
Perhaps six more ${ }^{\wedge}$ on a level has fallen, or more It has not lodged on the trees They are as usual on the $S$ side of the walls \& fences-and judging from the direction of their ridges the snow wind was due north. Behind Monroe's tight board fence it is a regularly swelled but unbroken bankbut behind the wall this side carved scollops
into countless ^ perforations-scrolls-\& copings
An open wall is then the best place for a drift- Yet these are not remarkable rich- The snow was perhaps too dry. Now at $41 / 4$ the blue shadows are very distinct on the snow banks-

On the N. side of the Cut above the crossing-the jutting edges of the drift are quite handsome upon the bank-the snow is raised 12 feet above the track \& it is all scolloped with projecting eaves or copings $\{-\}$ like turtle shells


They
project from 3 to 5 feet \& I can stand under them. They are in 3 or 4 great layers one lapping
over another like the coarse edge of a shell-looking along it they appear somewhat thus copeing has broken \& great blocks have bank-like smoothed


Often this by its own weight fallen down the blocks of white marble.

The exquisite purity of the snow \& the gracefulness of its curves are remarkable. Around some houses there is not a single trackNeither man woman nor child-dog nor cat nor fowl has stirred out today.- There has been no meeting. Yet this afternoon since the storm it has not been very bad travelling.

## Jan 7

They say there was yet more snow at Boston 2 feet even At breakfastime the thermometer stood at $12^{\circ}-1$ Smith's was
// earlier it was probably much lower- at $24^{\circ}{ }^{-2}$
early this morning. The latches are white with frost at noon
They tell how I swung on a gown on the stair way when I was at chelmsfordthe gown gave way I fell \& fainted \& it took 2 pails of water to bring me to-for I was remarkable for holding my breath-in those cases-

Aunt L. tells how (a $4^{\text {th }}$ of July?) I stood
at the window there \& exclaimed-the bells
ring, \& the guns fire, \& the pee-pe you")
Mother tried to milk the cow which took
father brought on trial-but she kicked at her \& spilt the milk ${ }^{3}$ (They say a dog had bitten her teats) Proctor laughed at her as a city girl \& then he tried

[^5]but the cow kicked him over-\& he finished by beating her with his ${ }^{1}$ cow-hide shoeCapt. Richardson milked her warily-standing up. Father came home-\& thought he would for she needed much to be milked
"brustle right up to her" ^ but suddenly she lifted he\{r\} leg \& "struck him"fair \& square right in the muns ${ }^{2}$ "-knocked him flat \& broke the bridge of his nouse-which He distinctly heard her hoof rattle on his nose shows it yet. ^ This "started the claret" \& without staunching the blood he at once drove her home to the man he had her ofShe ran at some young women by the waywho saved themselves by getting over the wall in haste.

Father complained of the powder in the
M. H. garret. At ${ }^{3}$ Town meeting but it did not get moved while we lived there Here he painted over his old signs for guide boards-\& got a fall when painting Hale's ${ }^{4}$ (?) factory. Here the bladder John was playing with burst on the hearth- The cow came into the entry after pumpkins-I cut my toe-\& was knocked over by a hen with chickens $\& c \& c$.

Mother tells how at the Brick House I cam we each had a little garden a few feet square-\& I came in one day having found a potatoe just sprouted which by her advice I planted in my garden- Ere long

[^6]John came in with a potatoe which he had planted-\& had it planted in his garden- "O mother I have found a potatoe all sprouted. I mean to put it in my garden." \&c Even Helen is said to have found one- But next I came crying-that some body had got my po-tatoe-\&c \&c-but it was restored to me as the youngest \& original discoverer if not inventor of the potatoe-\& it grew in my garden-\& finally its crop was dug by myself \& yielded a dinner for the family.

I was kicked down by a passing oxhad a chicken given me by Lidy-Hannah-\& peeped through the key hole at it- Caught an eel with John- Went to bed with new boots on-and after with cap- Rasselas given me. \&c \&c-

Asked P. Wheeler-"Who owns all the land?" Asked mother having got the medal for geography, "Is Boston in Concord"- If I had gone to Miss Wheeler a little longer should have received the chief prize book-"Henry Lord Mayor"-\&c \&c Pm. up river
The snow is much deeper on the river than it was on an average 8 or 9 inches. The cold weather has brought the crows \& for the first time this winter I hear
them cawing amid the houses. I noticed yesterday-from $3^{1}$ to 6 feet behind or N. W. of a small elm a curve in a drift answering to the tree-showing how large an eddy it had producedThe whole surface of the snow on fields \& river is little
composed now of flat rough ^driftslike the surface of some rough slaty rocks. Hardly anywhere is the ice visible now- //

It is completely frozen at the Hub. bath. bend now-a small strip of dark ice thickly sprinkled with those rosettes of crystals 2 or 3 inches in diameter- This surround by a broad border of yellowish spew. The water has oozed out from the thinnest part of the black ice \& I see a vapor curling up from it. There is also much vapor in the air looking toward the woods- I go along the edge of the Hub. meadow woods-the N side where the snow is gathered, light \& up to my middle-shaking down birds nests- Returning just before sunset, the few little patches of ice look green as I go from the sun(which is in clouds)- It is prob. a constant phenomenon-in cold weather when the ground is covered

[^7]with snow \& the sun is low-morning or evening-\& you are looking from it.

I see birch scales (bird-like) on the snow
on the river more than 20 rods $S$ of the nearest and only birch-\& trace them north to it.

$$
\text { Jan } 8^{\text {th }} \text { '56 }
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P. m. to Walden-

The snow is about a foot or prob.
a little more-deep on a level-\& considerably drifted-but on the pond $\mathrm{it}^{1}$ is $\mathrm{v} 12^{\mathrm{th}}$ inst.
not more than 5 inches deep on an average, being partly turned into snow ice ${ }^{2}$ by the sinking of the ice-\& perhaps partly blown off-

Many catbird nests about the pond in ${ }^{3}$ ap. one I see a snake's slough interwoven. The leaves of red oak shrubs All
are still quite bloody colored- Most
that I see, but one, $\quad V 2^{2 n d}$ inst
of the p- pine cones ^ are open-^ I see
prying into the black fruit of the alderalong the pond-side a single prob.
// lesser-redpoll-(4?) yellowish breast-\& distinct white bar on wing. Monroe is fishing there. As usual a great pickerel had bitten \& ran off-\& was lost, he supposed, among the brush by the shore. He tells of an eel up the N. Branch-that weighed 7 lbs-also that Geo Melvin spearing one night

[^8]-speared a large owl (prob. cat owl) that sat near by.
For a couple of days the cars have been very much delayed by the snow-\& it is now drifting somewhat. The fine dry snow is driving over the fields like steam, if you look toward the sun, giving a new form to the surfacespoiling the labor of the track-repairers-gradually burying the rails- The surface of the snow on the pond is finely scored in many places by the oak leaves which have been blow across it- They have furrowed deeper than a mouse's track-\& might puzzle a citizen. They are more frisky than a squirrel.

Many of the young oaks ap. not to have lost any leaves yet- They are so full of them that they still sustain some masses of snow-as if there were birds nests for a core- I see the great tracks of white rabbits that have run \& frisked in the night along the pond side. Jan. $9^{\text {th }}$ ' 56

Clear Cold morning. Smiths thermometer $24^{0}-1 \quad / /$ ours $14^{0}-2$ at breakfasttime $-6^{\circ}-3$ at 9 Am .
$3^{4} \mathrm{Pm}$ to Beck Stows The thermometer
at $2^{\circ}+$ when I return at $4^{5} 1 / 2$ it is at
$2^{-6}$ prob. it has been below zero for
the greater part of the day. I meet choppers ap. coming home early on ac.

[^9]of the cold. I wade through the swamp
2 feet V Jan $12^{\text {th }}$
where the snow lies light $18^{1}$ inches deep
a few leaves of andromeda \&c peeping out-I am a birds nesting.
on a level-^ The mice have been out
\& run over it. I see one large bush
of winter-berries-still quite showy though
somewhat discolored by the cold. The rabbits
have run in paths about the swamp.
Go now anywhere in the swamp \& fear
The fisherman whom I saw on Walden last night will find his
no water. lines well frozen in this morning.
In passing through the deep cut on ${ }^{2}$
the New Bedford road-that a little
sand, which was pretty coarse, almost
gravel, had fallen from the bank-\&
was blown over the snow, here \& there- The
surface of the snow was diversified
by those slight drifts, or perhaps cliffs
which are left a few inches high, (like
the fracture of slate rocks)-with a waved outline-
was
lines

of these little drifts in ridges may be $1 / 8$ of an inch high- This may help decide how those drifts (?) ${ }^{3}$ or cliffs (?) are formed.
Yet when it blows \& drifts again it presents a similar appearance.
// It has not been so cold throughout
the day before-this winter. I hear the boots of passing traveller's squeak.

[^10]Jan 10
The weather has consid. moderated $2^{0}-1$ at breakfast time-(It was $8^{\circ}-2$ at 7 last evening) but this has been the coldest night probably. //
You lie with your feet or legs curled
the sheets shining with frost about your mouth
up-waiting for morning $\wedge$. Water ${ }^{3}$ left by
the stove is frozen thickly-\& what you sprinkle in bathing falls on the floor iceThe house plants are all frozen-\& soon droop \& turn black. I look out on the roof of a cottage covered a foot deep with snow, \& wondering how the poor children in its garret-with their few rags-contrive to keep
I mark the white smoke from its chimney whose contracted wreathes are soon dissipated in this stinging air-\& think of the size of their wood pile
their toes warm - ^ And again I try to realize how they panted for a breath of cool air those sultry nights last summer- Realize it ${ }^{4}$ now if you can. Recall the hum of the mosquitoe\{.\}
It seems that the snow storm of Saturday night was a remarkabl one reaching many hundred miles along the coast. It is said that some thousands passed the night in cars-
The kitchen windows were magnificent last night with their frost sheaves-surpassing any cut or ground glass.

Remembering the walk of yesterday
I love to wade \& flounder through
the swamp now-these bitter cold days when the snow lies deep on the ground- And

[^11]I need travel but little way from the town to get to a Nova Zembla Solitude-to wade through the swamps-all snowed up-untracked by man-into which the fine dry snow is still drifting till it is even with the tops of the water andromeda \& half way up the high blueberry bushes- I penetrate to islets inaccessible in summer-my feet slumping to the sphagnum far out of sight beneath-where the alder-berry glows yet-\& the azalea buds-\& perchance a single treesparrow or a chicadee lisps by my sideWhere there ${ }^{1}$ are few tracks even of wild animals-perhaps only a mouse or two have burrowed up by the side of some twig \& hopped away in straight lines on the surface of the light deep snow-as if too timid to delay-to another hole by the side of another bush- And a few rabbits have run in a path amid the blueberries \& alders about the edge of the swamp- This is instead of a polar sea expedition \& going after Franklin. There is but little life \& but ${ }^{2}$ few objects it is true- We are reduced to admire buds even like the partridges-\& bark like the rabbits \& mice.-the great yellow \& red forward looking

[^12]buds of the azalea-the plump red ones of the blueberry-\& the fine sharp red ones of the pan. andromeda-sleeping along its stem- The speckled alder black alderthe rapid growing dog-wood-the pale brown \& cracked blueberry-\&c Even a little shining bud which lies sleeping behind its twig \& dreaming of spring-perhaps half concealed by ice, is object enough- I feel myself upborne on the andromeda bushes beneath the snow-as on a springy basket work-then down I go up to my middle in the deep but silent snow-which has no sympathy with my mishap- Beneath the level of this snow how many sweet berries will be hanging next August ${ }^{1}$ !

This for yesterday-the coldest day yet
This freezing weather I see the pumps dressed in mats \& old clothes-or bundled up in straw- Fortunate he who has placed his cottage on the south side of some high hill or some dense wood-\& not on the middle of the Great Fields where there is no hill nor tree to shelter itThere the winds have full sweep-\& such a day as yesterday-the house is but a fence to stay the drifting snow- Such is the piercing wind-no man loiters between his house \& barn- The road track is soon obliterated \& the path to the
which leads round to the back of the house
front door ^ which was ${ }^{1}$ dug this morning is filled up again-\& you can no
longer see the tracks of the master of the house who only an hour ago half
took refuge in some subterranean apart ment there. You know only by an occasional white weath of smoke from his chimney-which is at once snapped up by the hungry air that he sits warm-

Studying the almanac to learn how long it is before Spring. ing his wits there within-^ But his neighbor who only half a mile off has placed his house in the shelter of a wood-is digging out of a drift his pile of roots \& stumps, hauled from the swamp, at which he regularly dulls his axe \& saw, reducing them to billets that will fit his stove. With comparative safety \& even comfort he labors at this mine.
As for the other-the windows give no sign of inhabitants-for they are frosted over as if they were ground glass-\& the curtains are down beside- The path is snowed up \& all tracks to \& fro-no sound issues from within. It remains only ${ }^{2}$ to examine the chimney's nostrils-I look long \& sharp at it \& fancy that I see some smoke against sky there-but this deceptivefor as we are accustomed to walk up to an empty fire-place \& imagine
that we feel some heat from it-so I have $\{e-\}$ convinced myself that I saw smoke issuing from the chimney of a house which had not been inhabited for 20 years. I had so vivid an idea of smoke curling up from a chimneys top-that no painter could have matched my imagination- It was as if the spirits of the former inhabitants revisiting their old haunts-were once more boiling a spiritual kettle below.- A small whitish bluish cloud almost instantly dissipated, as if the fire burned with a very clear flame-or else the postmeridian hours having arrived-it were partially raked up, \& the inhabitants were taking their siesta.

Jan $11^{\text {th }} 10^{\text {th }}$ still
P. m. Worked on flower-press.

Jan $112^{\text {th }}$ ' 56
P. m. to Walden.

Cold as the weather has been for some days-it melting a little on the $S$ side of houses today for the first time for quite a number of days-though the $9^{\text {th }}$ ult was the coldest day thus far-the therm. hardly going below zero during the day- Yet whenever I have been to Walden-as Jan $4^{\text {th }}-8^{\text {th }}$ \& to day-I have found much water under the snow above the ice, though
there is but about 5 inches both snow
\& water above the ice. Jan $4^{\text {th }}$ was the coldest day that I have been there\& yet I slumped through the snow into water-which evidently was prevented from freezing at once by the snow- I think that you may find water on the ice thus at any time-however cold-\&

Prob. some of the overflow I noticed on the river a few days ago was owing to the
however soon it may freeze- weight of the snow as there has been no thaw.
Obseved that the smooth sumachs about the N side of the Wyman Meadow a great had been visited by partridges \& ^ many of still crimson The same next day on the other side the pond. the ${ }^{\wedge}$ berries were strown on the snow ${ }^{\wedge}$ - There they had eaten them perched on the twigs. Elsewhere they had tracked the snow from bush to bush-visiting almost every bush \& leaving their traces- The mice also had run from the base of one sumac to that of another on all sides-though there was no entrance to the ground there-probthey had climbed the stems for berriesMost of the bunches now hang ${ }^{1}$ half broken off by time \&c-


The lespedeza now a very pale brown looks thus


[^13]The sunsets I think are now
particularly interesting- The colors
of the west seem more than usually wan, perhaps by contrast with this
simple snow clad earth over which we look \& the clear cold sky-a sober but extensive redness-almost every night passing into $\mathrm{a}^{1}$ dun- There is nothing to distract our attention from it.

Monroe who left his ${ }^{2}$ lines in Walden on the $8^{\text {th }}$ cut them out today-but he got no fish-though all his bait were gone.

The January Sunsets.
To-day I burn the first stick of the // wood which I bought \& did not get from the river- What I have still left of wood the river ^ would-added to what of it I reserve for other uses, would last me a week longer.
Animals that live on such cheap food as buds \& leaves \& bark and wood-like partridge\{s $\}$ \& rabbits \& wild mice, never need apprehend a famine.
I have not done wondering at that voracity of the pickerel-3 fresh perch \& part of another in its maw-! If there are a thousand pickerel in the pond, \& they eat but one perch or shiner meal a day-there go a thousand perch or shiners for you

[^14]out of this small pond- One year would require $365.000!{ }^{1-}$ not distinguishing frogsCan it be so? The fishermen tell me that when they catch the most, the fish are fullest.

Mother reminds me that when we lived at the Parkman House she lost a ruff $11 / 2$ yards long \& with an edging 3 yards long to it which she had laid on the grass to whiten-\& looking for it she saw a robin tugging at the tape string of a stay on the line. He would repeatedly get it in its mouth-fly off \& be brought up when it got to the end of its tether- Miss Ward thereupon tore a linen handkerchief into strips \& threw them out-\& the robin carried them all off. She had no doubt that he took the ruff.

It is commonly said that fishes are long lived on ac. of the equable temperature of their element- The temperature of the body of Walden may perhaps range from perhaps at bottom much less. or $53^{\circ}$ $85^{\circ}+\wedge$ down to $32^{\circ}+\wedge$ While that of the air about $\{-\}$ it ranges from $100^{\circ}+$ down to $28^{\circ}-2$ or $128^{\circ}$ more than $2^{\text {ce }}$ as much. Yet how large a portion of animal life becomes dormant or emigrates in the winter-\& on those that remain with us there is an increase of fur \& prob. of

[^15]down-corresponding to the increased coldIf there is no corresponding thickening of the integument or scales of fishes on the approach of winter-they could seem to enjoy no advantage over ${ }^{1}$ land animals. most land animals
Beside their thick coats the rabbits \& partridges (?) seek some comparatively warm \& sheltered place in which to sleep-but where do the fishes resort- They may sink to the bottom-but it is scarcely so warm there as at the bottom of a grey rabbit's or a fox's burrow. Yet the fish is a tender animal in respect to cold- Pull ${ }^{2}$ him out in the coldest weather $-\&$ he at once becomes encased in ice \& as stiff as
a stake-and a fox (?) stands at his ease on the
Frogs which perchance are equally tender, and must (?) ${ }^{3}$ come to the air occasionally, are therefore ice devouring him. ${ }^{\wedge}$ They may be said to live compelled go into ${ }^{4}$ the mud \& become dormant.
then in a southern climate- Even the tough mud turtle possesses a southern constitution.

- He would snap in vain-\& soon cease snapping
at the N. W. wind when the thermometer is
at $25^{\circ}$ below zero- Wild mice \& spiders
\& snow fleas would be his superiors Jan $12^{\text {th }} 12^{\text {th }}$
Moderating though at zero at 9 Am Pm to Andromeda swamps
Measuring snow- It is about a fortnight since we had about a foot of snow fall on 2 or 3 inches which was firmly crusted-
\& a week since about 6 inches fell upon the last-I guess at these depths-
\& we have had clear cold weather ever since
I carry a 4 foot stick marked in inchessticking striking it down as far as it will go at every $10^{\text {th }}$ step-first beginning in the first field west of the RR cause way 4 to 6 rods from the RROpen fields
\& walking par. with the RR- $\quad \mathrm{N}$ to S .

|  | 145 | 309 | 10 | 11 | Then Trillium a thick chiefly Pine wood-75 yrs old. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19 | 10 | 10 | 8 | 8 |  |  |
| 11 | 8 | 12 | 8 | 10 |  |  |
| 14 | 9 | 11 | 8 | 13 | 8 | N to S |
| 10 | 14 | 6 | 12 | 9 | 12 |  |
| 7 | 15 | 8 | 8 | 10 | 8 |  |
| 12 | 13 | 7 | 12 | - 13 | 11 |  |
| 9 | 22 | 9 |  | ce 10 | 8 |  |
| 7 | wall | 10 | 9 | 10 | 11 |  |
| $6^{1}$ | 7 | 11 | 7 | -wall- | 11 |  |
| 7 | 6 | 9 | 10 | 20 | 9 |  |
| 9 | 7 | 11 | 10 | 16 | 8 |  |
| 9 | 7 | 9 | 10 | 598 | 9 |  |
| 10 | 7 | 422 | 7 | 73) 728 | 10 |  |
| 10 | 8 | Then cross | 9 | average | 10 |  |
| 6 | 10 | to E of RR | 14 | say 10 i.e. $12^{2}$ | 7 |  |
| 9 | 12 | 6 rods off | 9 |  | 10 |  |
| 145 | 9 | in Stows | 11 |  | 12 |  |
|  | 309 | Meadow | 422 |  | 8 |  |
|  |  |  | 598 |  | 9 |  |
|  |  |  |  |  | 10 |  |
|  |  |  |  |  | 11 |  |

19) 182 (say $91 / 2$ or $111 / 2$

Other things being equal the snow should be deeper in woods than in open fields because the trunks of trees take up room there-but this may be more than balanced by what is dissipated on the branches. ${ }^{3}$

[^16]Then Sproutland between
RR \& Andromeda Pond
down hill toward the W.

| 15 | The $1^{\text {st }}$ Andromeda Swamp |  | Wheelers |
| :--- | :---: | :---: | :---: |
| 11 | from E to W | Squirrel |  |
| 20 | 24 | The result of | Wood |
| 17 | 16 | 34 measures in | Nof R |
| 17 | 20 | Walden $-\underline{8 \text { or } 10}$ | W of RR |
| 13 | 26 | acres of which did not | measuring |
| 14 | 29 | freeze till during the | from S |
| 16 | 26 | $\underline{\text { snow of a fortnight }}$ | to N par |
| 15 | 16 | ago-gave $51 / 6$ | with RR |
| 17 | 19 |  | 12 |
| 15 | 27 |  | 9 |
| 17 | 27 |  | 10 |

12) 187 (say $151 / 2 \quad 24 \quad 12$
$171 / 210$
27 10
22 12
16 12
17 8
28 9
33 11
28 7
$30 \quad 7$
13) 476 (say $234 / 5$ 12

The snow in the swamp was 8
within about 3 inches of the top $\quad 7$
of the highest andromeda 12
bushes-\& was swelled about 3 or 4 inches higher there than between such- Foxes had sunk from 1 to 4 inches in it.

12
19) 192 (
say 10 (or 12
an av. mixed
pine \& oak wood
not very level-say
75 years old ${ }^{2}$

Prob. there is less snow in the woods than in open land-though it may lie high \& light.

In the swamp the dull red leaves of the andromeda were just peeping out-the snow lying not quite level but with gentle swells about the highest clumps of bushes-

Deep as the snow was, it was no harder but perhaps easier walking there-than in summer. It would not much impede a mouse running about below.
Though the snow is only 10 inches deep on a level farmers affirm that it is 2 feet deep-con-fidently-

$$
\text { Jan } 13^{\text {th }}
$$

Sunrise-a heavy lodging snow almost rain-has been falling how long-coming from the eastward- The weather comparatively warm but windy- It will prob. turn to rain. say 4 or 5 inches deep It sticks to the sides of the houses.

Took to pieces a pensile nest which I found the $11^{\text {th }}$ ult on the south shore of Walden on an oak sapling (red or black) about 15 feet from the ground. Though small it measures 3 inches by 3 in the extreme \& was hung between horizontal two ^ twigs or in a fork forming about a right angle-the $3^{\text {d1 }}$ side being regularly rounded without any very stiff material. The twigs extended 2 or 3 inches beyond the nest-

[^17]The bulk of it is composed of fine shreds
or fibres-pretty long (say 3 to 6 inches) of ap. inner oak (?) bark, judging from some scrapes of the epidermis adhering. It looks at first sight like sedge or grass- The bottom, which I accidently broke off \& disturbed the arrangement of--was composed of this, \& white \& pitch pine needles\& little twigs about the same size \& form rough with little leaf stalks or feet Yes they are
bud shoulders-(prob hemlock (?) ^) \& also strips \& curls of Paper birch epidermis-\& some hornet or \{other\} wasp nest used like the last. I mention the most abundant material first. Prob. the needles \& twigs were used perhaps bent by bird
on ac. of their (curved form \&) elasticity to give shape to the bottom. The sides, which were not so thick, were composed of bark shreds-paper birch \& hornet nest (the 2 latter chiefly outside, agglutinated prob- to bind \& conceal \& keep out the wind). ${ }^{-1}$ together But most pains was taken with the thin edge $\&$ for $3 / 4$ of an inch down-where beside the bark fibres-birch paper-\& hornets nest-some silky reddish brown, and also some white fiber, was used to bind all with-almost spun into to threads \& passed over the twigs \& agglutinated to them-or over the bark edge- The shreds of birch paper were smaller there \& the hornets nest looked as if it had been reduced to a pulp by the bird \& spread very thinly here \& there over all, mixed with the brown silkThis last looked like cow's hair-but as I found a piece of a small brown coccoon though a
(NB some of the same on my red-eye's nest)
little paler, I suspect it was from that ${ }^{\wedge}$ - The
white may have been from a coccoon-or else
nest
vegetable silk. Prob a vireo's ^ may be red-eye's.

In our workshops we pride ourselves on discovering a use for what had previously been ${ }^{1}$ regarded as waste- But how partiall \& accidental our economy compared with Natures. In nature nothing is wasted-every decayed leaf \& twig \& fibre is only the better fitted to serve in some other department-\& all at last are gathered in her compost heapWhat a wonderful genius it is that leads the vireo to select the tough fibres of the inner bark-instead of the more brittle grasses for its basket-the elastic
the
pine needles $\& \wedge$ twigs curved as they dried to give it form-and as I suppose \&c \&c
the silk of coccoons to bind it together with. I suspect that extensive use is made of these abandoned coccoons by the birds\& they if anybody-know where to find at least
them. There were ${ }^{\wedge} 7$ materials used in constructing this nest \& the bird visited as many distinct localities many timesalways with the purpose or design to find some particular one of these materials -as much as if it had said to itself-now I will go \& get some old hornet's nest from one of those that I saw last fall down in the maple swamp (-perhaps thrust my bill into them)-or some silk
from those coccoons I saw this morning.
It turned to rain before noon
4 or 5 inches of very moist snow or sleet //
having fallen-
Jan $14^{\text {th }}$ Sunrise- Snows again
I think that you can best tell from what side the storm came by observing on which side of the trees the snow is plastered.

The snows crows are flitting about the houses
\& alight upon the elms.
After snowing an inch or 2 it cleared up at night. Boys \&c go about straddling the fences, on the crust Jan 15
A fine clear winter day-
P. m. to hemlocks on the crust. slumping in every now \& then. A bright day-not cold -I can comfortably walk-without gloves-yet my shadow is a most celestial blue- This only require a clear bright day \& snow-clad earthnot great cold. I cross the river on the crust-with some hesitation- The snow appears considerably deeper than the $12^{\text {th }}$ ult-may be 4 or 5 inches deeper\& the river is indicated by a mere depression in it
or
In the street not only fences but trees are obviously shortened as by a flood- You are sensible that you are walking
at a level a foot or more above
the usual one- Seeing the tracks where a leaf had blown along \& then tacked \& finally doubled \& returned on its trail I thought it must be the track of some creature new to meI find under the hemlocks in \& upon the snow, ap. -brought down by the storm, an abundance of those little dead hemlock twigs described on the $13^{\text {th }}$ ultThey are remarkably slender \& without stiffness like the fir (\& I think spruce) twigs-\& this gives the hemlock its peculiar grace- These are not yet curved much-\& perhaps they got that form from being placed in the nest.

$$
{\underline{\text { Jan 16 }} 6^{\text {th }}\{\text { ' }\} 56 ~}_{\text {ren }}
$$

8 Am down RR-measuring snow-
having had one bright day since the last flake fell-but as there was a crust which would bear yesterday-(as today) it cannot have settled much. The last storms have been Easterly \& north easterly.

| In yard 5 measures <br> gave $15+$ inches | In open fields-measuring as |
| :--- | :---: |
| near as possible where I did the $12^{\text {th }}$ |  |


| W. of RR |  |  | E of RR |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | 118 | 13 34) 416 ( | 16 | 13 | 13 | or | av. of open fields |
| 8 | 119 | 13 | 17 | 14 | 17 | 156/10 | 136/10-or perhaps ${ }^{1}$ |
| 9 | 1110 | 13 say | 16 | 15 |  | V. Feb $12{ }^{\text {t }}$ | 14 since I |
| 8 | 138 | 15 | 13 | 21 | 11 |  | measured most on |
| 10 | $15 \quad 13$ | $13 \quad 121 / 4$ | 13 | 11 |  |  | the W \{av of 16\} |
| 10 | $17 \quad 12$ | 15 | 13 | 9 | 23 |  | It being \{so\} much the |
| 11 |  |  | 21 |  |  | say | deepest on the side of |
| 11 | $31 \quad 11$ | 13 | 21 | 12 | 25 | 155/8 | the RR from which |
| 9 | $8 \quad 13$ | 12 | 13 | 14 | 360 |  | the storm came. ${ }^{2}$ |
| 17 |  |  |  |  |  |  |  |

[^18]Geo. Prescott guessed it was $\underline{21 / 2}$ feet on an av.!!
Trillium Woods
through mid. as before
18 Between woods \& RR-N. W. the av. of
$18 \quad 12$ measures was $181 / 2+$
Why so much ( $51 / 2$ inches) more now in the woods than on the $12^{\text {th }}$ as comp. with open fields? Was the driving snow caught in a small wood? or did it settle less in the rain there? or since the snow on ${ }^{1}$ account of bushes?

13
20
15
13
17
18
19
15
18
$\qquad$
17) 291 (say 17

I hear flying over-(\& see) a snow bunting-a clear loud tcheep or tcheop, sometimes rapidly trilled or quavered, calling its mates.

With this snow the fences are scarcely an obstruction to the traveller-he easily steps over them.
Often they are buried. I suspect it is $21 / 2$ feet deep in Andromeda swamp now. The snow is much deeper in yards-roads \& all small enclosures-than in broad fields.

Jan $17^{\text {th }}$

Henry Shattuck tells me that the quails come almost every day \& get some saba beans within 2 or 3 rods of his house. Some which he neglected to gather. Prob. the deep snow drives them to it. ${ }^{2}$

[^19]
## Jan $18^{\text {th }}$ ' 56

J. B. Moore-says that he has caught 20 lbs of pickerel in Walden in one winter \&-and had had nearly as good luck 5 or 6 times the same winter there; not less than 10 lbs at one time-Suppose then ${ }^{1}$ that he has caught 50 pickerel there in one winter-\& all others the same winter 150-you have $200^{2}$ caught in one winter. I suspect there are as many as 2000

5 men caught 333 lbs in a pond in Eastham in
that will weigh a pound. one day this winter say the papers-largest $51 / 2 \mathrm{lbs}$
Analysed a nest which I found Jan $7^{\text {th }}$
in an upright fork of a red maple sapling on the edge of Hub's swamp woood N side nearthe deep grooves made by the twigs on each side river-about 8 feet from the ground ${ }^{\wedge}$ - It may be a yellowbird'sExtreme breadth outside 3 inches-inside $11 / 2$. Extreme height outside 3 inches-inside $15 / 8$ sides $3 / 4$ inch thick.

It is composed of 7 -principal materials-
I name the most abundant $1^{\text {stt-I mean most abundant when }}$ compressed.)

## silvery

1 Small compact lengths of ^ pappus about 7/8 inch long, perhaps of erechthites), $1 / 2$ inch deep \& nearly pure, a very warm bed-chiefly concealed, just beneath the lining inside.
2 Slender catkins, often with the buds \& twig ends (of perhaps hazel) throughout the whole bottom \& sides-making it thick but open \& light, mixed with ap.
being bleached
3 Ap. milkweed silk i.e. fibres like flax, but white, ^ also in sides \& rim-some of it almost thread like-white with some of the dark epidermis- From the pods? No, I am about certain, from comparison, that it is the fibres of the bark of the stem-V $19^{\text {th }}$ inst.

4 Thin ^ strips of grape vine bark-chiefly in the rim \& sides for $3 / 4$ inch down-\& here \& there throughout-
5 Wads of ap brown fern wool mixed with the last 3
6 Some finer pale brown \& thinner shreds of barkخdirectly within the walls \& bottom underneath pappus, (mixed with some short shreds of grape bark) ap. not grape- If this were added to the grape-These 5 materials would be not far from equally abundant.
$7 \quad$ Some very fine pale brown wiry fibres for a lining just above the pappus \& somewhat mixed with it. Perhaps for coolness being springy.

Directly beneath the pappus was considerable \{other\} shreds
of grape \& the other Bark-short \& broken-
In the rim \& sides some cotton ravelings $-\&$ some
short shreds of fish line or crow fence-A red maple leaf within the bottom-a kernel of corn just under the lining of fibres-(perhaps dropt by a crow or blackbird or jay-or squirrel while the nest was building.) A few short length of stubble or weed stems in the bottom \& sides A very little brown wool ${ }^{1}$ like ap. that in the nest last described-which may be brown fern wool. The milkweed-\& fern wool conspicuous without the rim \& about the twigs.
I was most struck by that mass of pure pappus under the inside lining.

Pm. to Walden-
to learn the temperature
of the water- The snow is so deep at present in the streets that it is very difficult turning out, \& there are cradle holes between this \& the P. ${ }^{2}$ O. The side walks being
blotted out-the street like a woodmans path -looks like a hundred miles up country.

I see where children have for some days come to school across the fields on the crust-from Abiel Wheeler's ${ }^{1}$ to the RR crossing. I see their tracks in the slight snow upon the crust which fell the $14^{\text {th }}$ ult. They save a great distance \& enjoy the novelty.

This is a very mild melting winter day-but clear \& bright- Yet I see the blue shadows on the snow at Walden., The snow lies very level there about 10 inches deep \& for the most part bears me as I go across with my hatchet- I think I never saw a more elysian blue than my shadow I am turned into a tall blue Persian from my cap to my boots, such as no mortal dye can produce-with an amethystine hatchet in my hand.
I am in raptures at my own shadowof
What if the substance were ${ }^{\wedge}$ as etherial a nature. Our very shadows are no longer black-but a celestial blue, This has nothing to do with cold methinks, but the sun must not be too low.

I cleared a little space in
which was 9 to 10 inches deep
the snow ^ over the deepest part of the pond \& cut through the ice-
which was about 7 inches thick only the first 4 inches perhaps-snow ice the other 3 clear. The moment I reached the water it gushed up \& overflowed the ice driving in the snow
me out this yard ${ }_{\wedge^{1}}{ }^{1}$ where it stood at last $21 / 2$ inches deep above the ice-

The thermometer indicated $331 / 2^{\circ}$ at top
$\& 342 / 3$ when drawn up rapidly from 30 feet beneath. So ap..$^{2}$ it is not much warmer beneath.

Goodwin was fishing there- He says he once caught 50 lbs of pickerel here in 2 days-he 3 thought 25 or 30 fishes. Thought that there were many hundred caught here in a winterthat nearly all were females.

Observed some of those little hard galls on the high blueberry pecked or eaten into by some bird (or possibly mouse) for the little white grubs which lie curled up in them. What entomologists the birds are- Most men do not suspect that there are grubs in them. \& how secure the latter seem under these thick dry shells! Yet there is no secret but it is confided to some one. Jan $19^{\text {th }}$ ' 56
Another bright winter day- Pm to river-to get some Water-asclepias-to see what birds nests are made of-

The only open place in the river between
Hubbard bridge \& I have no doubt Lee's bridge, as I learned in my walks the next day.
Hunts bridge \& the ${ }^{\wedge} R R$ bridge is a small space against Merricks pasture just

As usual just below a curve in shallow water, with
below the Rock. the added force of the assabet.
The willow osiers of last years growth-
on the pollards in Shattuck's row-Merrick's
Pasture-from 4 to 7 feet long-are perhaps as bright as in the springthe lower half yellow the upper red. but they are a little shrivelled in the bark.

Measured again the great elm in front of Charles Davis' on the Boston road-which he is having cut down-1 The chopper White has taken off most tried his axe of the limbs \& just begun ^ on the foot of the tree- He will prob. fall it on Monday, or the $21^{\text {st }}$. At the smallest place between the ground and the limbs 7 feet from the ground, it is $15 \mathrm{ft} \& 2$ inches in circumference at 1 foot from the ground on the lowest side-23 9/12. White is to have 10 dollars for taking off the necessary limbs \& cutting it down merelyhelp being found him. He began on Wednesday- Davis \& the neighbors were much alarmed by the creaking in the late storms-for fear it would fall on their roofs. It stands 2 or 3 feet into Davis' yard.

[^20]As I came home through the village
at $81 / 4 \mathrm{Pm} \mathrm{by}^{1}$ a bright moon-light-the moon nearly full \& not more than $18^{\circ}$ from the zenith-I saw the The wind NW but not strong \& the air pretty cold- I saw the melon rind arrangement of the clouds on a larger scale \& more distinct than ever before. There were 8 or 10 courses of clouds-so broad that with equal intervals of blue sky they occupied the whole width of the heavens-broad white scirrho-stratus in perfectly regular curves from west to east across the whole sky- The 4 middle ones occupying the greater part of the visible cope were particularly distinct.
They were all as regularly arranged as the lines on a melon \& with much straighter sides as if cut with a knife- I hear that it attracted the attention of ${ }^{2}$ those who were abroad at 7 Pm \& now at 9 Pm it is scarcely less remarkable- On one N ors
side of the heavens $\wedge$ the intervals of blue look almost black by contrast- There is now, at 9, a strong wind from the N. W. Why do these bars extend E \& W- Is it the influence of
the sun-which set so long ago?
-or of the rotation of the earth-? The bars which I notice so often morning \& evening -are ap. connected with the sun at those periods.
In Oliver N. Bacon's Hist. of Natick p 235 it is said that of Phaenogamos plants "Upwards of 800 species were collected from Natick soil in 3 years' time, by a single individual." I suspect it was Bacon the Surveyor. Theres is given a list of those which are rare in that vicinity-among them are the following which I do not know to grow
found since
prob here
here- Actaea rubra ${ }^{1} \mathrm{~W}^{2}-$ Asclepias tuberosafound since
Alopecurus pratensis ${ }^{3}$-Corallorhiza odontorhiza (?)
found since
Nutt.- Drosera filiformis Nutt.-Ledum lati-
folium ${ }^{4}$-Malaxis Lilifolia W. (What in Grey?)-
found since
Sagina procumbens ${ }^{5}$.
Among those rare there but common here are-
Calla Virginica-Glechoma Hederacea-Iris
prismatica-Lycopus Virginicus-Mikania Scandens
Prunus borealis-Rhodora Canadensis-Xyris aquatica-Zizania aquatica.

They, as well as we, have Equisetum
hyemale-Kalmia glauca-Liatris scariosa
-Ulmus fulva-Linnaea Borealis \&c \&c Pyrola
maculata.
Bacon quotes White who quotes Old ${ }^{6}$ Col. memorial-acof man. \& customs \&c of our ancestors.

[^21]Bacon says that the finest elm
in Natick-stands in front of Thomas
F Hammond's house \& was set out "about the year 1760."- "The trunk, 5 feet from the
G. Emerson gives a dif. account. q.v. ground, measures 15 1/2 feet."

Observed within the material of a robins nest this pm a cherry stone.

Gathered some ${ }^{1}$ dry water milkweed stems to compare with the materials of the birds nest of the $18^{\text {th }}$ ult. The bird used-I am almost not the pods certain-the fibres of the bark of the stem ${ }^{\wedge}$, just beneath the epidermis-only the bird's is older \& more fuogy fuzzy \& finer like worne twine or string The fibres \& bark have otherwise the same appearance under the microscope- I stripped off some bark about $1 / 16$ of an inch wide \& or 12
6 inches long-\& separating 8or $10{ }^{\wedge}$ fibres from the epidermis rolled it in my fingers making a thread about the ordinary size. This I could not break by direct pulling \& no man could. I doubt if a thread of flax or hemp of the same size could be made so strong. What an admirable material for the Ind. fish line! I can easily get much longer fibres-I hold a piece of the dead weed in my handsstrip off a narrow shred of the bark before 10 or 12 my neighbor's eyes \& separate afew fibres as fine as a hair roll them in my fingers \& offer him the thread-to try its strength. He is surprised \& mortified to find that
he cannot break it. Prob. both the Ind.
\& the bird discovered for themselves this same (so to call it) wild hemp-

The corresponding fibres of the mikaniaseem not so divisible-become not so fine \& \{frozzy\}-Though somewhat similar-are not nearly so strong. I have a hang-bird's nest from the river side made almost entirely of this in narrow shreds or strips with the epidermis on wound round \& round the twigs \& woven into a basket- That is this bird has used perhaps the strongest fiber which the ${ }^{1}$ fields afforded\& which most civilized men have not detected.

Knocked down the bottom of that summer yel-bird's nest (made on the oak at the island last summer)-it is chiefly of fern some
wool \& also $\underline{\mathrm{ap}}{ }^{\wedge}$ sheeps wool (?) with a fine green moss (ap that which grows on button bushes) \& some milkweed fibre
in mixed $\wedge \&$ all very firmly agglutinated togetherSome shreds of grape vine bark about it. Do not know what portion of the whole nest it is. Jan $20^{\text {th }} 56$

In my experience I have found nothing so truly impoverishing as what is called wealth-i.e. the command of greater means than you had before-possessed--though comparitively few \& slight stillfor you thus inevitably acquire a more expensive habit of living-\& even

[^22]the very same necessaries \& comforts cost you more than they once did. Instead of gaining you have lost some independenceAnd if your income should be suddenly lessened-you would find yourself poor though possessed of the same means which once made you rich. Within the last 5 years I have had the command of a little more money than in the previous for I have sold some books \& some lectures5 years-^ Yet I have not been a whit better fed or clothed or warmed or sheltered -not a whit richer, except that I have been less concerned about my livingbut perhaps my life has been the less serious for it-\& to balance it I feel now that there is a possibility of failure- Who knows but I may come upon the town, if I \{were\} as if likely the public want no more of my books-or lectures (which Before I was much likelier to take the town upon my shoulders last is already the case). ^ That is I have lost some of my independence on them--when they would say that I had gained an independence. If you wish to give a man a sense of poverty-give him a thousand dollars- The next hundred dollars he gets will not be worth more than ten that he used to get. Have pity on him-with\{-\}hold your gifts.
P. m. Up river to Hollowell Place-

I see the blue between the cakes of snow cast out in making a path, in the triangular recesses , though it is pretty cold-but the sky is completely overcast. It is now good walking on the River-for though there has been no thaw since the snow came-a great part of it has been converted into snow ice by sinking the old ice beneath the water\& the crust of the rest is stronger than in the fields because the snow is so shallow \& has been so moist. The river is thus an advantage as a highway not only in summer-\& when the ice is bare in the winter-but even when the snow lies very deep in the fields. It is invaluable to the walker-being now, not only the most interesting, but excepting the narrow \& unpleasant track in the highways, the only practicable route. The snow never lies so deep over it as else-where-\& if deep it sinks the ice \& is soon converted into snow ice to a great extent beside being blown out of the river valley. Neither is it drifted here. Here where you cannot walk at all in the summer is better walking than elsewhere in the winter- But what a different
aspect the river's brim now from what it wears in summer! ${ }^{1}$ I do not this moment hear an insect hum-nor see a bird-nor a flower. That museum of animal \& vegitable life-a meadow-is now reduced to uniform level of white snowwith only half a dozen kinds of shrubs \& weeds rising here \& there above it.

Nut Meadow Brook is open on the river meadow-but not into the river- It is short in the middle remarkable that-the ^ strip ^ below the Island-(v. yesterday) should be the only open place between Hunt's Bridge \& Hubbards at least-prob as far as Lee's- The river has been frozen solidly ever since the $7^{\text {th }}$ ult-\& that small open strip of yesterday \& in middle
(about 1 rod wide $\wedge$ ) was prob. not more than a day or 2 old. It is very rarely closed I suspect-in all places more than $\{-\}$
2 weeks $^{2}$ at a time. Ere long it wears its way up to the light \& its blue artery again here \& there appears ${ }^{\wedge}$. In one place close to the river Where the forgetmenot grows, that springy place under the bank just above the RR bridge the snow is quite melted \& the bare ground \& flattened weeds exposed for 4 or 5 feet.
Broke open a frozen nest of mud \& stubble in a black willow-prob. a robin's-in which

[^23]were a snail (?) shell \& a
skunk cabbage seed? Were they not left ${ }^{1}$ there by a mouse-? or could they have been taken up with the mud- They were somewhat

A downy woodpecker-without red on head-the
in the mud. only bird seen in this nook-I stand within 12 feet-
The arrangement of the clouds last night attracted attention in various parts of the town.

A prob. kingbird's nest-on a small horizontal branch of a young Swamp white oak-amid the twigs about 10 feet from ground- (This tree is very scraggy-has numerous short twigs at various angles with the branches-making it unpleasant to climb\& affording support to bird's nests-)- The nest is round running to rather a sharp point on one side beneath- Extreme diam. outside $41 / 2$ to 5 inch within 3 inch-depth within 2 inch without 4 or more. The principal materials are 10 - In the order of their abundance thus
$1^{\text {st }} \quad$ reddish \& grey twigs some a foot \& more in length which are cranberry vines-with now \& then a leaf on prob- such as were torn up by the rakers-some are as big round as a knitting needle-\& would be taken for a larger bush- These make the stiff mass of the outside above \& the rim.
$\underline{\underline{2}}^{\text {nd }}$ Woody roots rather coarser intermixed from water side shrubs prob. some are from cranberry vinesThese are mixed with the last \& with the bottom.
$3^{\text {d }} \quad$ Softer \& rather smaller roots \& root fibres of herbaceous plants-mixed with the last \& a little further inward.

[^24]$4^{\text {th }} \quad$ (Still to confine myself to the order of abundance)
Withered floweres \& shoots bits of the gray downy stems of the fragrant everlasting- These more or less compacted \& ap agglutinated from the mass of the solid bottom-\& more loose with the stems run down to a point on one side the bottom.
5 What I think is the fibrous growth of a willow dark-colored moss-like with a wiry ^ hair-like

stem (possibly it is a moss) This with or without the tuft is the lining \& lies contiguous in the sides \& bottom.
6 What looks like brown decayed leaves \& confervae from the dried bottom of the river side-mixed with the-everlasting tops internally in the solid bottom.
$7 \quad$ Some finer brown root fibres chiefly bet the lining of no 6 \& hair \& the coarser fibres of no 3-
8 A dozen whitish coccoons mixed with the everlasting tops \& dangling about the bottom peak externally-
also 8 or 10 very minute coccoons mixed
a few within the solid bottom. with these-attached in a cluster to the top of an everlasting
9 A few black much branched roots (?) ${ }^{1}$ (perhaps? of some utricularia from the dried bottom of river) mixed with nos $2 \& 3$.
white \& black
10 Some horse hair-^ together with no 5, forming the lining.
There are also with the coccoons \& everlasting
tops externally one or 2 cotton grass heads-one small white feather-\& a little greenish fuscous moss from the button bush-\& in the bottom a small shred of grape vine bark.

[^25]Jan $21^{\text {st }} 56$
4 men, cutting at once, began to fell the (v $19^{\text {th }}$ ult)
big elm ^ at 10 Am -went to dinner at 12, \& got through at $21 / 2 \mathrm{Pm}$.
They used a block ${ }^{1}$ \& tackle with 5 falls drawn by
fastened to the base of a buttonwood ${ }^{2}, \&{ }^{\wedge} \mathrm{a}$
horse, to pull it over the right way-
one said he pulled 20 turns
So it fell without harm down the
road. I measured it at 3 pm just
after the top had been cut off-
It was 15 feet to the first crotch. At ${ }^{3}$
the most up right \& prob. highest limb
75 feet it ^ was cut off, \& measured $27^{\wedge}$ inches
in circumference- As near as ${ }^{5}$ I could
tell from the twigs on the snow, \& what the choppers said who had just removed the top-it was about 108 feet high.

At 15 feet from the stump it divided into 2 parts, about an equal size
One was decayed and broken in the also
(which ^ proved hollow)
fall, being undermost, the other ${ }^{\wedge}$
at its origin was $114 / 12 \mathrm{f}^{\mathrm{t}}$ in circum-
(The whole tree directly beneath this crotch was $193 / 12$ round) ference $\wedge$. This same limb branched again at $368 / 12$ from the stump-\& these measured just beneath the crotch 14 10/12 in circ.

At the ground the stump measured 8 4/12 one way-8 3/12 another-7 1/2 another. It was solid quite through at but(excepting 3 inches in middle) though somewhat decayed within-\& I could count

[^26]This is wrong
pretty well 105 rings to which add 10 more

| for the hollow \& you have 115. | V. 26 inst |
| ---: | :--- |
| I could not count the decayed part there well-1 | op. the |

There was a current bush at the first
$\mathrm{t}^{2}$
crotch-^ and in a large hole at that making 3 there
height-where prob. a limb once broke off ^ \& also
-^ a great many stones bigger than a
hen's egg-prob cast in by the boys.
part of
There was also ${ }^{\wedge}$ an old brick with some clay
30 or 40 years within the tree at the stump completely over grown \& cut through
by the axe. I judged that there were
supposing one main limb sound
at least 7 cords then in the road ${ }^{\wedge}-\&$
Davis thought that the pile in the yard
from ${ }^{3}$ the limbs taken off last week contained
4 more-He said that there were
some flying squirrels within \& upon
it when they were taking off the limbs.
There was scarcely any hollowness
to be discovered. It had grown
very rapidly the first 50 years or could
so. You ${ }^{\wedge}$ see where there had once
been deep clefts between different portions
of the trunk at the stump-but the tree had afterward united \& over grown them leaving some bark within the wood.
In some places the trunk as it lay on the ground-(though flatwise) was as a
as higher than the tallest man's head.
This tree stood directly under the hill

[^27]which is some 60 feet high-the old burying
hill continued-S of where the Flag staff was planted when the British marched into town- This tree must have been some 50
25 yrs old \& quite sizeable then. White, when taking off the limbs-said that he could see all over Sleepy ${ }^{1}$ Hollow. byond the hill. There were several great wens on the trunk-a foot in diameter \& nearly as much in height. The tree was so sound I think it might have lived 50 yrs longer- But Mrs Davis said that she would not like to spend another such a week as the last before it was cut down.
They heard it creak in the storm-one of the great limbs which The 2 main limbs proved hollow. reached over the house was cracked.
Jan $22^{\text {nd }} 56$
Pm. to Walden
Tracks \& inferences-this \& the next day-
The Walden road ${ }^{2}$ is nearly full of snow still to the top of the wall on the N side-
though there has been no snow falling since the $14^{\text {th }}$ ult- The snow lies particularly solid. Looking toward the sun the surface consists of great patches of shining crust \& dry driving snowgiving it a watered appearance Miss Minot talks of cutting down the oaks about her house for fuel because she cannot get her wood teamed sledded home on
account of the depth of the snow-though it lies all cut there- James at R. W. E's waters his cows at the door because the brook is frozenIf you wish to know whether a tree is hollow-or has a hole in it, ask the squirrels- They know as well as whether they have a home or not. Yet a man lives under it all his life without knowing \& the chopper must fairly cut it up before he can tell. If there is a cleft in it he is pretty sure to find some nut shell or materials of a birds nest left in it.

At Bristers Spring I see where a squirrel has been to the spring \& also ${ }^{1}$ sat on a low alder limb \& eaten a hazel-nut- Where does he find a sound hazel nut now-? Has them in a hollow tree.

See tracks of fishermen \& pickerel v. forwardAt Walden, near my old residence, I find that since I was here on the $11^{\text {th }}$ ultapparently within a day or two some gray or red squirrel or squirrelshave been \{fe\}eding on the p - pine cones extensively. The snow under one young pine is covered quite thick with the scales they have dropt while \{other\} feeding over-head-I count the cores of 34 cones on the snow there
\& that is not all- Under another pine there are more than 20-\& a well worn track from this to a fence post 3 rods distant under which are the cores of 8 cones and a corresponding \{amount\} of scales. The track is like a very small rabbit. ${ }_{\infty 0}^{0}$-going up the page. They have gnawed off the ${ }^{1}$ cones which were perfectly closed. I see where one has taken one of a pair \& left the other partly off- He had first sheared off the needles that were in the way \& then gnawed off the sides or cheeks of the twig to come at the stem of the cone-which, as usual was cut by successive cuts as with a knife while bending it. One or prob died last summer when little over a year old two small perhaps dead-^ certainly $\{-\}$ unripe ones were taken off \& left unopened. I find that many of those young
pines are now full of unopened cones
ap
which ^ will be two years old next summer\& these the squirrel now eats. There are
 also some of them open, perhaps on the most thrifty twigs. 2
${ }^{3}$ F. Morton hears today from
Plymouth that 3 men have just caugh\{t $\}$ in Sandy Pond in Plymouth about 200

[^28]lbs of pickerel in 2 days.
Some body has been fishing in the pond this
morning and the water in the holes is beginning
to freeze-I see the track of a crow
V. 24 inst
$\leftrightarrows \leftarrow$ the toes as
usual less spread $-\&$ the middle one making a more curved line furrow in the snow than the partridge-as if they
The inner (?) toe a little the nearest to the mid. one- v Feb $1^{\text {st }}$
moved more unstably recovering their
feeble on their feet
balance. ^ This track goes to every
hole but one or 2 out of a dozen
(directly from hole to hole sometimes flying a little)
${ }^{\wedge}$ \& also to an apple core on the snow-
I am pretty sure that this bird was
after the bait which is usually dropt
E. Garfield says they come reg. to his holes for bait as soon as he has left
on the ice or in the hole ${ }^{\wedge}$ - So if the
pickerel are not fed it is- It had even
visited, on the wing, a hole now
frozen \& snowed up which I made
far from this in the middle of
the pond several days since-as
I discovered by its droppings- The same kind that it had left about
the first holes-
I was surprised on breaking with pickerel
my foot the ice in a ${ }^{\wedge}$ hole near the shore-evidently frozen only last night to see the water rise at once $1 / 2$ inch above it. Why should the ice be still sinkingIs it growing more solid \& heavier?

Most were not aware of the size of the
great elm till it was cut down- I surprised
some a few days ago by saying that when
its trunk should lie prostrate it would be
higher than the head of the tallest man in the town-\& that 2 such trunks could
chamber
not stand in the room ${ }^{\wedge}$ we were then in there would be ample room for
-which was 15 feet across-that ${ }^{\wedge}$ that
double bed-stead on the trunk-nay
that our whole the very dinner table we at
we were sitting ^ with our whole party of
7, 8 chairs \& all around it might be
ca
set there. (In the de^yayed part of the but end there were curious fine black lines, giving it a geographical look here \& theredozen inches long- sometimes following the line of the rings-the boundary of a part which had reached a certain stage of decay. The force on the pullies broke off more than a foot in width in the middle of the tree-much decayed.

I have attended the felling \& so to speak
the funeral of this old citizen of the townI who commonly do not attend funerals -as it became me to do-I was the chief if not the only mourner there- I have taken the measure of its grandeurhave spoken a few words of eulogy at
his grave-but there remembering the nil
maxim nil-de mortuis ^ nisi bonum(in this case (magnum)
^ but there were only the choppers \& the passers by to hear me- Further the town was not represented-the Fathers of the town-the select men-the clergy were not there-but I have not known a fitter occasion for a sermon of late. Travellers whose journey was for a short time
pay
delayed by its prostrate body were forced to give it some attention \& respect- But the axeboys had climbed upon it like ants \& commenced chipping at it before it had There was a man already bargaining for some part fairly ceased groaning ${ }^{\wedge}$. How have the mighty fallen! Its history extends back over more than half the whole history of the town. Since its kindred could not conveniently attend-I attended. Methinks its fall marks an epoch in the History ${ }^{1}$ of the town- It has passed away together with the clergy of the old school-\& the which used to rattle beneath it stage-coach-^ Its virtue was that it steadily grew \& expanded from year to year about
to the very last. On an average $-\wedge$ - $5 / 7$ of an inch in a year (near the ground) How much of old Concord falls with it. The town-clerk will not chronicle its fall-I will-for it is of greater moment to the town than ${ }^{2}$ that of many
a human inhabitant would be- Another
Instead of erecting a monument to it-we take all possible pains
link that bound us to the past is broken.
to obliterate its stump-the only monument of a tree which is commonly allowed to
How much of Old Concord was cut away
stand
with it! A few such elms would alon ${ }^{1}$ constitute a town ship- They might claim to send a representative to ${ }^{2}$ the General Court to look after their interests-if a fit one could be found-a native American ${ }^{3}$ one in a true \& worthy sense-with Catholic principles. Our town has lost some of its venerableness- No longer will our eyes like a vast corinthian column by the way-side rest on its massive grey trunk $\wedge-$ no longer
shall we walk in the shade of its lofty
spreading dome- It is as if you had laid
the axe at the feet of some venerable
Buckley or Ripley- You have laid the
axe-you have made fast your tackle
to one of the king-posts of the town.
I feel the whole building wracked by it.
Is it not sacrilege to cut down the tree which has so long looked 4 over Concord beneficently?

Supposing the first 15 feet to average 6 feet
in Diameter-They would contain more than 3
of wood ${ }^{5}$
cords \& a foot ${ }^{\wedge}$; but prob.-not more than 3 cords.
With what feelings should not the citizens
hear that the biggest tree in the town has
fallen? A traveller passed ${ }^{6}$ through the town
\& saw the inhabitants cutting it up-
without regret
The tracks of the partridges by the sumachs made before the $11^{\text {th }}$ are perhaps more prominent

[^29]now than ever-for they have consolidated the snowunder them so that as it settled it has left them alto relievo- They look like broad chains extending straight far over the snow.

I brought home \& examined some of the droppings
They were brown \& dry though partly frozen
of the crow mentioned 4 ps back $_{\wedge_{\wedge}}{ }^{1}$ After long
with a microscope
study ^ I discovered that they consisted of the other ges
seeds \& skins \& ${ }^{\wedge}$ indi ${ }^{\wedge}$ stible ${ }^{2}$ parts of red-cedar
I detected the imbricated scale like leaves of a
some berry stem \& then the seeds-\{and\} the now
berries and ^barberries-^ \& perhaps something more-
black skins of the cedar berries-but easily the large seeds of the barberries
\& I knew whence it had probably come
-i.e. from the cedar woods \& barbaerry ${ }^{3}$
bushes by Flints Pond. These then make part of the food of crows in severe weather when the snow is deep as at present.
$=$ Jan $23^{\mathrm{d}}=$
Brown is filling his ice house //
The clear ice is only from $11 / 2$ to 4 inchesnearly
thick-all the rest or more than 4 a foot
the snow
is snow ice-formed by ${ }^{\wedge}$ sinking the first under the water-\& freezing with the water.
The same is the case at Walden.
or transparent
To get ice at all clear ${ }^{\wedge}$ you must
scrape
keep the snow off-after each fall.
Very little ice is formed by addition below such a snowy winter as this. yesterday
There was a white birch scale ${ }^{\wedge}$ in the which I made snowded up snowed up hole ${ }^{\wedge}$ in the very middle of Walden5. I have no doubt they blow across the widest part of the pond.

[^30]When approaching the pond yesterday
through my beanfield I saw where some fishermen had ${ }^{1}$ come away \& the tails of their string of pickerel had trailed on the deep snow when they sank in it-

I afterward saw where they had been fish-
the water just beginning to freeze
ing that forenoon-^\& also where some
had fished the day before with red fin-
ned minnows which were frozen into an
That these men had chewed tobacco
inch of ice- \& ate apples-
All this I knew though I saw neither nor squirrel
man-^ nor pickerel-nor crow-
snow in the ${ }^{2}$
Measured this Pm the ${ }^{\wedge}$ same fields
which I measured just a week ago, to see how it had settled- It has been uniformly fair weather of average winter coldAdd 2 for ice at bottom V. Feb. $12^{\text {th }}$


It has settled therefore in open fields $11 / 10$ inches-Showing how very solid, it is, as many have remarked. Not allowing
of the light snow above the crust
for what ${ }^{\wedge}$ may have drifted against the RR embankment-(though 4 I measured on both sides of it.) The drifting of light surface snow may have produced nearly all the change.

It seems then that as it lies light in the wood at first it settles much faster there so that, though it was nearly $31 / 2$ inches the deepest there a week ago-it is less than 1 inch the deepest there now. 5

[^31]Jan $24^{\text {th }} 56$
A journal is a record of experiences \& growth-not a preserve of things well done or said. I am occasionally reminded of $a^{1}$ statement ${ }^{2}$ which I have made in conversation \& immediately forgotten-which would read much better than what I put in my journal. It is a ripe dry fruit of long past experience which falls from me easily without giving pain or pleasure- The charm of the journal must consist in a certain green-ness-though freshness-\& not in maturity. Here I cannot afford to be remembering what I said or didmy scurf cast off-but what I am \& aspire to become. Reading the hymns of the Rig Veda trans lated by Wilson-which consist in a great measure of simple epithets addressed to the firmament or the dawnor the winds-which mean more or less as the reader is more or less alert \& imaginative-\& seeing how widely the various translators have differedthey regarding not the poetry, but the history \& philology-dealing with very concise sanscrit which must almost always be amplified to be understood-I am sometimes inclined to doubt if the

[^32]translator has not made something out of nothing-whether a real idea or sentiment has been thus transmitted to us from so primitive a period- I doubt if learned Germans might not thus edit pebbles from ${ }^{1}$ the sea-shore into hymns of the Rig ${ }^{2}$ Veda3-\& translators translate them accordingly-extracting the meaning which the sea has imparted to them in very primitive times- While the commendisputing
tators \& translators are differing about the meaning of this word or that, I hear only the resounding of the ancient sea The deepest murmurs I can recall\& put into it all the meaning I am possessed of-for I do not the least care where I get my ideas or what suggests them.

I knew that a crow had that day plucked the cedar berries \& barberries by Flint's Pond-\& then flapped silently through the trackless air to Walden, where it dined on fisherman's baitthough there was no living creature to tell me.

Holbrooks elm measured today
11 feet 4 inches in circ. at 6 feet from ground.
The size of one of the branches of the Davis elm-call it the Lee elm for a Lee formerly lived there. Cheney's largest 4 in fron of Mr Frosts 12-4. at 6 ft
$16-6$ at $1^{\mathrm{ft}}$
The great elm op Keyes' land nearby-call it the Jones elm $-17-6$ at 2 behind \& 1 plus before
$15-10$ at 4

[^33]$15-5$ at 6
16 at $71 / 2$ or spike on W side
At the smallest place bet. the ground \& branches
this is a little bigger than the Davis ${ }^{1}$
or near
elm-but it is not so big at ^ the ground nor is it so high to the branching--about 12 feet-nor are the branches so big-but it is much rounder \& its top broader fuller \& handsomer- This has an uncommonly straight sided \& solid looking trunk-Measuring only 2 feet less at 6 feet from the ground than at $2^{2}$. Pm. up Assabet
Even the patches of shining snow crust between those of dry white surface snow-are slightly blue like ice \& water-

You may walk anywhere on the river now- Even the open space against Merricks ${ }^{3}$ below the Rock has ${ }^{4}$ been closed again-and there is only 6 feet of water there now. I walk with a peculiar sense of freedom over the snow-covered ice-not ${ }^{5}$ fearing that I shall break through I have not been able to find any tracts of muskrats this winter- I suspect that they very rarely venture out in winter with their wet coats. I see squirrel tracks about the hemlocks- They are much
like rabbits' only the toes are

[^34]very distinct. $\leftrightarrow \Leftarrow$ From this
they pass $* *$ into a semicircular
figure sometimes $\approx$ Some of ${ }^{1}$ the first are 6 inches from
outside to outside
length wise-with 1 to 2 feet of interval-
Are these the grey or red?
A great many hemlock cones
have fallen on the snow \& rolled
down the hill-
Higher up against ${ }^{2}$ the Wheeler Swamp
I see where many squirrels-perhaps red-for the tracks appear smallerhave fed on the alder cones on the twigs which are low or frozen into the ice-stripping them to the core just as they do the pine cones. Here are the tracks of a crow like those of the $22^{\text {d }}$ ult-with a long hind toe nearly 2 inches- The 2 feet are also nearly 2 inches apart-I see where the bird alighted descending with an impetus \& breaking through the slight planting crust with its feet side by side. How different this partridge track with its slight hind toe-open \& wide spread toes on each side-both feet forming one straight line, exactly thus $\leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow$ The middle 5 inches from centre to centretoe alternately curved to the right \& to the left-

[^35]and, what is apparently the outer toe, in each case shorter than the inner one-

I see under a great many treesblack willow \& swamp Wht oak-the bark scattered over the snow-some pieces 6 inches long-\& above see the hole which a woodpecker has bored.

The snow is so deep along the sides of the river that I can now look into nests which I could hardly reach in the summer- I can hardly believe them the same- They have only an ice egg in them now- Thus we go about raised generally speaking more than a foot above the summer level- So much higher do we carry our heads in the winterWhat a great odds such a little difference makes. When the snow raises us one foot higher than we have been accustomed to walk-we are surprised at our elevation! So we soar.

I do not find a foot of open water even on this North ${ }^{1}$ Branch as far as I go-i.e. to J. Hosmers lot. The river has been frozen unusually long \& solidly. They have been sledding wood along the river for a quarter of a mile in front of Merriams \& past the mouth of Sam Barrett's Brook-
where it is bare of snow hard glare ice on which there is scarcely a trace or oxen
of the sled-^ They have sledded home a large oak which was cut down on the bank- Yet this is one of the rockiest \& swiftest parts of the stream.-Where I have so often stemmed the swift currentdodging the rocks-with my paddle- There the heavy slow paced oxen with their ponder\{-\} ous squeaking load have \{plodd\} while the teamster walked musing beside it. That Wheeler swamp is a great place for squirrels- I observe many of their tracks along the river side there- The nests are of leaves \& ap. of the gray species.

There is much of the water-milkweed on the little island just above Dove Rock-it rises above the deep snow there.

It is remarkable how much the river has been tracked by dogs the week pastnot accompanied by their masters. They hunt perchance in the night more than is supposed-for I very rarely see one alone by day.
The river is pretty low \& has falling within a month for there has been no thawThe ice has broken \& settled around the rocks which look as if they had
burst up through it- Some maple
limbs which were early frozen in have been
broken \& stripped down by this irresistable weight.
You see where the big dogs have
slipped on one or 2 feet in their haste
-sinking to the ice-but having 2 more
feet it did not delay them.
I walk along the sides of the stream admiring the rich mulberry catkins of the alders which
look almost edible- They attract us because
they have so much of spring in them.
The clear red osiers too along the river side in front of Merriam's on Wheeler's side..

I have seen many a collection of stately
elms-which better deserved to be represented at the General ${ }^{1}$ Court than the than the
mannikins beneath - Perhaps they shaded
a barroom \& a victualling cellar \& groceries
they overshadowed
When I see their magnificent domes
miles away in the horizon-over intervening vallies \& forests-they suggest a village a community there- But ${ }^{2}$ after all, it is a secondary consideration whether there are human dwellings beneath them-these may have long since passed away- I find that into my idea of the village has entered more of the elm than of the human being.

They are worth many a political borough
They constitute a borough
The poor human representative of his party sent out from beneath their shade will not suggest a tithe of the dignitythe true nobleness \& comprehensiveness of view-the sturdiness \& independence-\& the serene beneficence that they do- They look from town-ship to township- A fragment of their bark is worth the backs of all the politicians in the union. They are their own
free soilers in (a peculiar but) broad sense-- They send their roots north \& south \& east \& west-\& many times into many a conservatives' Kansas ${ }^{1}$ \& Carolinasuch
who does not suspect their ${ }^{2}$ underground
they improve the subsoil he has never disturbed
railroads-^ \& many times their length of their principles
if the support ^ requires it. They battle with the tempests of a century-see what scars they bear what limbs they lost before we were born- Yet they never adjourn -they steadily vote for their principles \& send their roots further \& wider from the same centre. They die at their posts \& they leave a tough but for the choppers to exercise themselves about-\& a stump which serves for their monument.

They attend no caucus-they make no com-promise-they use no policy- Their one principle is growth-they combine a true
radicalism with a true conservatism
-their radicalism is not a cutting
away of roots-but an infinite multi-
plication \& extension of them under all surrounding institutions. For every inch ${ }^{1}$
may higher into
that they ${ }^{\wedge}$ rise toward ${ }^{2}$ the heavens they take
a firmer hold on the earth ${ }^{\wedge}$ Their conservative heartwood-in which no sap longer flows-does not impoverish their growth, but is a firm column to support it-\& when their expanding trunks ${ }^{3}$ no longer require it-it utterly decays- Their conservatism is a dead but solid heartwood which is the pivot \& firm column of support to all this growth-appropriating ${ }^{4}$ nothing to itselfassisting to extend
but forever by its support ^ extending the their
area of $\wedge$ radicalism. Half a century after they are dead at the core, they are preserved by radical reforms- They do not, like men, from radicals turn conservativeTheir conservative part dies out first -their radical \& growing part survives. They acquire new states \& territories while become
the old dominions decay-and ^ are the habitation of bears \& owls \& coons.

$$
\text { Jan. } 25^{\text {th }} 56
$$

P. m. up river

The hardest day to bear that we have
had-for beside being $5^{\circ}-5$ at M. \& at 4 P. m. there is a strong N. W. wind-

[^36]It is worse than when the thermometer was at zero all day- Pierce says it is the first day that he has not been able to work out doors in the sunThe snow is now very dry \& powdery \& though so hard packed drifts some-what- The travellers I meet have redfaces. Their ears covered- Pity those who have not thick mittens- No man could stand it to travel far toward this wind. It stiffens the whole face-\& you feel a tingling sensation in your fore-head -. Much worse to bear than a still cold. I see no life abroad no bird nor beast. What a stern bleak inhospitable as(I am off Clam shell hill) pect nature now wears-! ^ Where a few months since was a fertilizing river-reflecting the sunset-\& luxuriant meadows resounding with the hum of insects, is now a uniform crusted snow with dry powdery snow drifting over it \& confounding river \& meadow- I make haste away covering my ears, before I freeze there. The snow in the road has frozen dry -as dry as bran.

A closed P. pine cone gathered Jan $22^{\text {nd }}$ opened last night in my chamber- If you would be convinced how differently armed the squirrel is naturally for
dealing with p . pine cones-just try to get one off with your teeth. He who extracts with the aid of a knife
the seeds from a single closed cone ${ }^{\wedge}$ will be constrained to confess that the squirrel earns
It is a rugged customer \& will make your fingers bleed.
his dinner. ^ But the squirrel has the key to conical \& spiny
this ^ chest of many apartments- He sits on a post vibrating his tail \& twirls it as a plaything.
But so is a man commonly a locked up open
chest to us-to ^ whom; unless we have the key of sympathy-will make our hearts bleed.

The elms-they adjourn not night nor day-they pair not off- They stand for magnificence-they take the brunt of the tempest ${ }^{1}$-they attract the lightning that leaving only a few rotten members would smite our roofs. scattered over the highway. The one by Holbrooks is particularly regular\& lofty for its girth-a perfect sheaf-but thin leaved-ap. a slow grower-It bore a tavern sign for many a year- Call ${ }^{2}$ it the Bond (?) elm

$$
\text { Jan. } 26 \text { '56 }
$$

When I took the ether my consciousness amounted to this-I put my finger on myself in order to keep the place, otherwise I should never have returned to this ${ }^{3}$ world.

They have cut \& sawed off the but of the great elm at $91 / 2$ feet from the
ground-and I counted the annual rings there with the greatest ease \& accuracy-indeed I never saw them so distinct on a large but. The tree was quite sound there.-not the least hollow even at the pith. There were 127 rings. Supposing the tree to have been 5 years old when $91 / 2$ feet high, then it was 132 years old-or came up in the year-1724, just before Lovewell's Fight ${ }^{1}$. There were 2 centers fourteen (14) inches
apart.
will
of it.
tinct center-

The ac. coarse sketch give a general idea There were 13 disrings about each before they united \& one ring enclosed both. Then there was a piece of bark-which may be rudely represented by the upper black marksay 6 or 8 inches long. This was not overbut by
grown ^ till the $24^{\text {th }}$ ring. These
2 centers of growth corresponded in $6^{2}$ feet position to the 2 main branches ^ above\& I inferrred that when the tree was about 18 years old, the fork commenced at $91 / 2$ feet from the ground\{.\}but as it increased in diameter, it united higher \& higher up. I remember that the bark was considerably nearer

[^37]one center than the other. (There was bark in several places completely overgrown \& included on the extreme but end where cut offhaving ap. overgrown its own furrows.) Its diameter, where I counted the rings, was
one way, as near as I could measure in spite of the calf, $4^{\mathrm{f}} 3 / 12$ another $48 / 12-\&$ 45 feet. On the line by which I counted, which was the long way of the tree, it had grown in the first 50 years 20 inches or $2 / 5$ inch a year or about $1 / 9$ of anch a year. $\wedge$ the last $50-53 / 4$ inches ${ }^{\wedge}-\&$ there was a space of about 5 inches between the two-or

At this height it had grown on an average annually nearly 24/100 of an inch from the center
for the intermediate 27 years. on one side. Or counting
both sides had made nearly $1 / 3$ an inch growth.
The white or sap wood averaged about
2 inches thick. The bark was from 1 to
2 inches thick and in the last case I could dis distinct
count: from 12 to $15{ }^{\wedge}$ rings in it-as if it were regularly shed after that period.


The Court House Elm measured at 6 feet from the ground on the W side12 feet $11 / 2$ inches in circ. The Willow by the Jim Jones house14 feet at about 18 inches from ground-13-8/12" " 6
\& it bulged out much larger above this.
P. m.

Walked-down the river as far as the $S$ bend behind Abner Buttricks. I also know its condition as far as the Hub. Bridge in the other direction. There is not a square foot open between these extremes-\& judging from what I know of the river beyond these limits-I may safely say that it ${ }^{1}$ is not open-( ${ }^{2}$ the ${ }^{3}$ main stream I mean)-anywhere in the town- Of the the goose ground-say
North Branch-above the bath place ${ }^{\wedge}-\mathrm{I}$ to the Stone bridge v. $27^{\text {th }}$ inst. cannot speak confidently. The same must have been the case yesterday since it was colder. Prob. the same has been true of the river-excepting the small space against Merricks below (when it closed at the Hub. Bath)
the Rock ${ }^{4}$ (now closed) since Jan $7^{\text {th }} \wedge$ or nearly 3 weeks-a long time methinks for it to be frozen so solidly. A sleigh might safely be driven now from Carlisle Bridge ${ }^{5}$ to the Sudbury ${ }^{6}$ meadows on the river. Methinks it7 is a remarkable cold, as well as snowy, January-for we have had good sleighing eversince the $26^{\text {th }}$ of December-\& no thaw.

Walked as far as Flint's Bridge with Abel Hunt-where I took to the river- I told him I had come to walk on the river as the best place-for the snow had drifted somewhat in the road-while it was converted into ice almost entirely on the river-but asked

[^38]he-are you not afraid that you will getin? Oh no it will bear a load of wood from one end to the other- But then there may some 70 be some weak places- Yet he is $70^{1} \mathrm{yrs}$ old \& was born \& bred immediately on its banks. Truely one half the world does not know how the other half lives.

Men have been talking now for a week at elm
the P. O. about the age of the great ${ }^{\wedge}$-as a matter interesting-but impossible to be determined- The very choppers \& travellers have stood upon its prostrate trunk \& speculated upon its age- As if it were a profound mystery. I stooped \& read its years (127 at $91 / 2$ feet)
to them-^ but they heard me as the wind that once sighed through its branchesthey still surmised that it might be 200 yrs old-but they never stooped to read the inscription- Truly they love darkness rather than light. One said it was probably 150 -for he had heard somebody say-that for 50 yrs the elm grew-for 50 it stood still(wonder what portion of his career he stood still!) \& for 50 it was dying. ^ Truly all men are not men of science. They dwell within an integument of prejudice thicker than the bark of the cork tree-but it is valuable chiefly to stop bottles with-tied to their buoyant prejudices they keep them selves afloat when honest swimmers sink.

Talking with Miss Mary Emerson
this evening-she said-"It was not the fashion to be so original when I
she is readier to take my view-look through my
was young." eyes for the time than any young person that I
know in the town.
The white maple \{muds\} look large with bursting downy scales as in spring.

I observe that the crust is strongest over meadows though the snow is deep there \& there is no ice nor water beneath. but in pastures \& upland generally I break through. Prob. there is more moisture to be frozen in the former places-\& the snow is more compact. Jan 27 '56
I haved just sawed a wheel $13 / 4$ inches thick off the end of ap. a stick of red oak in my pile. I count 29 rings-And ${ }^{1}$ about of rings or divisions of some kind the same number ${ }^{\wedge}$ with more or less distinctness in the bark which is about $1 / 4$ of an inch thick. Is not the whole number of rings contained in the bark of all trees \{where\} a bark externally smooth? This stick has 2 centers of growth, each a little one side of the middle. I trace one easily to a limb which was cut off close to the tree about $31 / 2$ inches above the lower side of the section. The 2 centres are 1 inch apart on the lower side, 2 inches \& $5 / 8$ on the upper side the main one
There are 3 complete circles to each
on the lower side-\& 10 on ${ }^{1}$ the upper
side-before they coalesce-hence it was 7 years
closing up through $13 / 4$ inches of height.


There is a rough ridge confined to the bark
only \& about $1 / 4$ of an inch high extending from the crotch diagonally down the tree ap. to a point over the true center of growth.

Pm . Walked on the river
from the Old Stone to Derby's Bridge- It is
open a couple of rods under the Stone bridge
but not a rod below it
$\wedge$ \& also for 40 rods below the mouth of along the W . side
Loring's Brook-^ prob. because this is a mill stream. The only other open places within ${ }^{2}$ the limits mentioned yesterday-are in one or 2 places close under the bank, and concealed by it, where The river after freezing having shrunk warm springs issue. \& the ice settled a foot or 18 inches there so that you can see water over its edgeThe White maple at Derby's Bridge measures including ap. a very large sucker 15 feet in circ. at ground $\wedge-\& 10 \mathrm{ft} 5$ inches at not including sucker, there free
4 feet above the ground. ^ The 1
The lodging snow of Jan. $13^{\text {th }}$,-just a fortnight
ago, still adheres in deep \& conspicuous ridges
to large exposed trees-too stubborn to be
shaken by the wind-showing from which side the storm came.


The fruit stems of the dog wood still hold on \& a little fruit-

Of course the limbs should be smoother. The outline much like a peach tree-but it is without the numerous small limbs. or twigs Saw what I think were bass nuts on the snow on the river at Derby's RR Bridge. prob from up stream.

[^39]2"with" added to "in"

January $28^{\text {th }} 56$
Snowed all day-about 2 inches falling.
They say it snowed about the same all yesterday in N. York. Cleared up at night

Jan $29^{\text {th }} 56$
P. m. Measured the snow in the same places measured the 16 \& $23^{\mathrm{d}}-$ having had except yesterday-fair weather \& no. thaw-
W of RR- av. 111/2+ E of RR 17- av. of both sides.
on the $23^{\mathrm{d}}$ it was $\quad 111 / 3 \quad 14>-\mathbf{1 3} 3 / 4^{-1} \quad 153 / 4$
$121 / 3^{+2} \quad 141 / 3^{+}$
$16^{\text {th } " ~ " ~} 121 / 4 \quad---155 / 8 \quad-\mathbf{1 3} 6 / 10 \quad 156 / 10$ add 2 for ice at bottom $-V$. Feb $12^{\text {th }}$
Trillium Woods today 14 6/103 $\quad 16$ 6/10
the $23^{\text {d }} \quad 131 / 4^{+4} 151 / 4+$
$\begin{array}{lll}16 & 175 & 19\end{array}$
As I measured oftener W than E of RRthe snow is prob. about 14 on a level in open fields now-or quite as deep as at any time this winter- Yet it has ap. been settling a little the last 6 days-

In the woods it is not proportionally deep ap. it has also been settling-but it is not so deep there as on the $16^{\text {th }}$ because it settled rapidly soon after that date.

It is deeper E of RR -evidently because
it lies behind it like a wall-though I measure from -6 to 10 or 12 rods off on that

Since the $13^{\text {th }}$ ult there has been at no time less than
side. 1 foot on a level in open fields. ${ }^{6}$

[^40]It is interesting to see near the sources
small
even of ${ }^{\wedge}$ streams or brooks which now
flow through an open country-perhaps shrunken in their volume-the traces of ancient mills-which have devoured the primitive forest-the earthen dams \& old sluice ways-\& ditches and banks for obtaining a supply of waterThese relics of a more primitive period are still frequent in our midst. Such too probably has been the history of the most thickly settled \& cleared countries of Europe. The saw-miller is neighbor \& successor to the Indian. It is observable that not only the Moose \& the wolf disappear before the civilized man-but even many species of insects-such as the black-fly\& the almost microscopic 'no-see-em' How imperfect a notion have we commonly of what was the actual condition of the place where we dwell-3 centuries ago.

For the most part the farmers have not been able to get into the woods for the last fortnight or more-on ac. of the snow-\& some who had not got up their wood before are now put to their trumps-for though it may not be more than 18 inches deep on a level in sprout-lands the crust
cuts the legs of the cattle-\& the occasional drifts are impassable. Sometimes with 2 yoke of oxen and a horse attached to the sled-the farmer attempts to break his way into his lot-one driving while another walks before with a shovel-treading \& making a path for the horse-but they must take off the cattle at last \& turn the sled with their hands. Miss Minott has been obliged to have some of her locusts about the house cut down- She remembers when the whole top of the elm N of the road close to Dr . Heywoods broke off-when she was a little girl. It must have been then before 1800.

$$
\text { Jan } 30^{\text {th }} 56
$$

8 Am It has just begun to snow-those dry
little round ^ pellets like shot.
Geo. Minott says that he was standing with Bowers (?) ${ }^{1}$ \& Joe Barrett near Dr Heywood's barn in the September gale-\& saw an elm-2 ${ }^{\text {ce }}$ as big as that which broke off before his house-break off 10 feet from the ground-splinter all up-\& the barn bent \& gave so that he thought it was time to be moving. He saw stones "as big as that [air tight] stove, blown right out of the wall-" so by bending

[^41]to the blast he made his way home.
All the small buildings on the Walden road across the brook were blown back toward the brook- Minot lost the roof of his shed. The wind was southerly. As I walked above the old stone bridge on the $27^{\text {th }}$ ult-I saw where the river had recently been open open under the wooded bank on the W. side-\& recent saw dust \& shavings from the pail-factory-\& also the ends of saplings \& limbs of trees which had been bent down by the ice, were frozen in. In some places some water stood above-the ice-\& as I stood there I saw \& heard it gurgle up through a crevice \& spread over the ice. This was the influence of Lorings Brook-far above.

Stopped \{£1\} snowing before noon-not having amounted to anything. P. m. measured to see what difference
there was in the depth of the snow in dif adjacent fields as nearly as possible ${ }^{1}$ alike-\& similarly situated. Commenced 15 or 20 rods E of the RR-\& measured across Hubbards (?) Stows \& Collier's fields toward a point on the $S$ side of the last 25 rds E of Trillium Woods. These 3 fields were nearly level-somewhat meadowy, especially the $2^{\text {nd }}, \&$ at least 25 rods from the nearest disturbing influence-such as the RR

[^42]embankment-or a wood-


The walls no doubt gave the $1^{\text {st }} \& 3^{\text {d }}$ fields somewhat more snow- Yet I am inclined to think that in this trial the snow is shallower very nearly as the fields are more moist. It is 3 inches shallower here than nearer
showing the effect of that bank very clearly-6 to 15 rods off the RR where I measured yesterday. ^ but the av. is the same obtained yesterday for open fields E \& W of RR-\& proves the truth of that measuring.

The snow in the $1^{\text {st }}$ field measured 2 inches more than that in the $2^{\text {nd }}$ !

$$
+2=281 / 2+
$$

The andromeda swamp gave $261 / 2+\wedge$ (on the $+2=254 / 5$
more than
$12^{\text {th }}$ ult it was $234 / 5^{\wedge}$ ) It has prob. been about ${ }^{2}$
feet
$21 / 2$ say on the $16^{\text {th }}$ The andromeda calyculata is now quite covered \& I walk on the crust over an almost uninterrupted plain there. Only a few blueberries \& Andromeda paniculatas rise above it. Near the last I break through. It is so light beneath that the crust breaks there in great cakes under my feet \&

[^43]immediately falls about a foot making a great hole-so that once pushing my way through-for regularly stepping is out of the question in the weak places-makes a pretty good path.
NB In Wheelers squirrel wood which on the $12^{\text {th }}$
$$
+2=12 \quad+2=17
$$
gave $10{ }^{\wedge}$ inches of snow now gives $15{ }^{\wedge}$ which is what I should have judged from the changes in Trillium wood. They are affected alike.

The sproutland just South of this wood

$$
+2=234 / 10
$$

NB gives as average of 14 measurements $214 / 10$ ^ which I suspect is too much-it is so sheltered a place.

By the RR\{.\} against Walden I heard the lisping of a chicadee \& saw it on a sumachIt repeatedly hopped to a bunch of berries-took one-\& hopping to a more horizontal twig-place it under one foot \& hammed at it with its bill. The snow was strewn with the berries under its foot, but ${ }^{1}$ I could see no shells of the fruit- Perhaps it clears off the crimson only.

Some of the bunches are very large \& quite upright there still.

sumachs

[^44]Again I suspect that on meadows
the snow is not so deep \& has a firmer crust. In an ordinary storm the depth of the snow will be affected by a wood 20 or more rods distant-or as far as the wood is a fenceThe snow is so light in the swamps under the crust amid the andromeda that a cat could almost run there. There are but few tracks of mice-now the snow is so deep- They run underneath. The drift about Lynch's House is like this wind


There is a strong this P. m. from ${ }^{1}$ NW
\& the snow of the $28^{\text {th }}$ is driving like steam over the fields-drifting into the roadsOn the RR causeway-it lies in perfectly straight \& regular ridges a few feet
 like coarse bran. Now that there is so much snow it slopes up to the tops of the walks on both sides.

What a dif. between life in the city \& in the country at present-between walking in Washington street-threading your way between countless sledges \& travellers over the discolored snow-and crossing Walden Pond-

[^45]a spotless field of snow surrounded by woods-whose intensely blue shadows \& your own are the only objects- What a solemn silence reigns here-!

## Jan $31^{\text {st }}$

P. m. up North Branch

There are a few inches of light snow on top
of the little hard and crusted that I walked
on ${ }^{1}$ here last-above the snow ice- The old
tracks are blotted out \& new \& fresher ones
are to be discerned- It is a tabula rasa-
These fresh falls of snow are like turn-
ing over a new leaf of Nature's Album.
At first you detect no track of beast
or bird \& Nature ${ }^{2}$ looks more than commonly silent \& blank- You doubt if anything has been abroad-though the snow fell 3 days ago-but ere long the track of a squirrel is seen to or
making ^ from the base of a treeor ${ }^{3}$ the hole where he dug for acorns \& the shells he dropped on the snow around that stump. The wind of yesterday has shaken down countless oak leaves which have been driven hurry-scurry over this smooth \& delicate \& unspotted surface-\& now there is hardly a square foot which does not show some faint trace of them. They still spot the snow thickly
in many places, though few can be traced to their lairs. More hemlock cones also have fallen \& rolled down the bank. The fall of these withered leaves after each ruder blast-so clear \& dry that they do not soil the snow is a phenomenon quite in harmony with the winter.

Perhaps the tracks of the mice are the most amusing of any-they take such various forms-and though ${ }^{1}$ small are so distinct. Here is where one has come down the bank-\& hopped meanderingly across the riveror

$11 / 4$ inches wide by 56 or 7 apart from center to center-

But what track is this just
under the bank
$=-=<$ It must be
a bird, which at last struck the snow
with its wings and took to flight-there were but 4 hops in all-\& then it ended as above though there was nothing near enough for it to hop upon from the snow- The form of the track foot was some what like that of a squirrel
though only the outline was distinguished-
The foot was about 2 inches long \& it
was about 2 inches from outside of one
foot to outside of thother. 16 inches from
the rest in proportion
hop to hop-^ Looking ${ }^{1}$ narrowly I saw
where one wing struck the bank ten
feet ahead, thus $\equiv$ as it passedoccurred
$1 / 4$ of a mile down stream it ${ }^{\wedge}$ looked
again thus $\quad$-rmer : and near by still less of a track ${ }^{2}$ but ${ }^{2}$ marks as if it had pecked in the snow.
Could it be the track of a crow with its toes unusually close together? or was it an owl? Prob a crow V. Feb. $1^{\text {st }}$ hardly a doubt of it-
Some creature has been eating elm blossom
buds \& dropping them over the snow.
The tracks of the mice suggest ex-
tensive hopping in the night \& going a gadding- They commence \& terminate in the most insignificant little holes by the side of a twig or tuft\& occassionally they give us the type of their tails very distinctly-even side-wise to the course on a bank side-thus


[^46]Saw also the tracks prob- of a muskrat for a few feet leading from hole to hole just under the bank.

Feb 1 ${ }^{\text {st }}$ ' 56
2/3 grown
Our kitten Min ^ this morning was playing with Sophia's broom this morning, as she was sweeping the parlor, when she suddenly went into a fit, dashed round the room-\& the door being opened, rushed up 2 flights of stairs \& leaped from the attic window to the ice \& snow by the side of the door step-a descent of a little more than 20 feet-passed round the house \& was lost- But she made her appearance again-about noon at the window quite well \& sound in every joint-even playful \& frisky. Pm. Up river What gives to the excrements of the fox that clay color often, even at this season? Left on our eminenceI scented a fox's trail this p. m. (and have done so several times before) where he crossed the river-just 3 rods distantlooked sharp \& discovered where it had stopped by a prominence- Yet he could not have passed since last night-or 12 hours before -it being near the village. How widely they range these nights! I hear
that Daniel Foster of Princetown had 11 turkies taken from under his barn in one night last fall-prob. by a fox. 2 were found a week after buried under some brush in a neighboring wood.
The snow is somewhat banked toward the sides of the river-but shows darker yellowish or icy in the middle- Lichens blown from the black willows lie here \& there on the snow. Nut Meadow Brook open for some distance in the meadow- I was affected by the sight of some green polygonum leaves there- Some kind of minnow darted off- I see where a crow has walked along its side. In one place it hopped-\& its feet were side by side as in the track of yesterday-though a little more spread the toes- I have but little doubt that yesterday's track was a crows$\psi$ The 2 inner toes are near together-the middle more or less curved often.
I see a gray rabbit amid the young oaksin Hubs river-side grove
${ }^{\wedge}$ curled \& shrunk up-squatting on the \& begin to sketch it when
snow-I advance ^\& it plunges into a little by its side
hole in the snow ${ }^{\wedge}$-the entrance to its burrow 3 inches wide by a little more in length $\boldsymbol{O}$. The track of its foot is about 1 inch wide. I see a pitch pine seed blown 30
rods from J Hosmers little grove-

The Sheldon ${ }^{1}$ House in Deer field pulled down about 8 yrs since-represented in \& in Barber
Gleasons pictorial for ' $51^{\wedge}$-is in the style of the Hunt House-except that there is but one window on each side of
\& the Meeting house alone of those within the fort the door. It ^ survived the assault of $16751704^{2}$ \& the door through which a hole was cut \& a woman shot is still preservedThis has been a memorable January for snow \& cold- It has been excellent sleighing ever since the $26^{\text {th }}$ of Dec. not since
-very little3 less than a foot at any time before Jan $6^{\text {th }}$
the $13^{\text {th }} \&$ not less than a foot ${ }^{4}$ since ${ }^{\wedge}$ on a level in open fields ${ }^{\wedge}$-in swamps much more. Cars have been detained-the woodlots for the most part inaccessible- The river has been closed up from end to end-with the exception of one or 2 insignificant openings on a few days. No bare ice. The crows have been remarkably bold coming to eat the scraps \{cast\} out behind the houses. They alight in our yard. I think I have not noticed a tree sparrow during the month. Blue jays \& chicadees also common in the village-more than usual. We have completely forgotten the summer- There has been no Jan. thaw-though one prophesied it a fortnight ago because he saw snow fleas

[^47]The ponds are yielding a good crop of ice The eaves have scarcely run at all. It has been what is called "an old fashioned winter".

Feb $2^{\text {d }}$
Snowed again last night perhaps an incherasing the old tracks-\& giving us a blank page again-restoring the purity of nature- It may be even a trifle deeper now than hitherto.

Feb $3^{\text {d }}$
Analysed the crow b. bird's nest from which I took an egg last summer-8 or 10 feet up a white maple by river op- Island. Large of an irregular form appearing as if wedged in between a twig \& 2 large contiguous trunks. From outside to outside it measures from 6 to eight inchesinside 4-depth 2-height 6- The strips of
foundation is a loose mass of coarse ^ grape chiefly $\{\&\}$
vine bark ${ }^{\wedge}$-some 18 inches long by $5 / 8$ inch also wide-^ slender grass \& weed stems-mikania stems-a few cellular river weeds as rushes-sparganium -pipe grass-\& some soft coarse fibrous roots-

The same coarse grapevine bark
\& grass \& weed stems-together with some harder wiry stems-form the sides \& rim-the bark being passed around the twig-

The nest is lined with the finer grass \& weed stems \&cThe solid part of the nest is of half decayed
full of fine fibrous roots \& vegetable matter \& mud ^ bound internally
with grass stems \&c-\& some grape barkbeing $11 / 2$ inches thick at bottom-

Pulled apart \& lying loose it makes a great mass of material.
This like similar nests, is now a great haunt for spiders.

Pm up North Branch-
A strong N. W. wind (\& Therm. $11^{\circ}-$ ) driving the surface snow like steam-about 5 inches of soft snow now on ice. See many seeds of the hemlock on the snow still. \& cones which have freshly rolled down the bank.

Tracked some mice to a black willow by river side, just above spring-against the open swamp-and about 3 feet high in ap. an old woodpeckers hole-was prob. the mouse nest-a double fhandfulinner bark consisting 4/9 of fine fibres or shreds of ^ perhaps willow or maple $3 / 9$ the greenish moss ap. of buttonbush-2/9 the gray slate fur ap of rabbits or mice. Half a dozen hogs bristles might have been brought by some bird to its nest there. These made a very warm \& soft nest.
// Got some kind of vireo's nest from a maple far up the stream a dozen feet high-pensilealmost within ^ wholly rather coarse grape vine shreds without the same \& bark covered with the delicate white spider-nests (?) birch bark shreds \& brown
coccoon silk.
Returning saw near the Island ${ }^{1}$ a shrike //
glide by, cold \& blustering as it was-
with a remarkably even \& steady sail
or gliding motion 8 or 10 feet above the ground
^ like a hawk-^ \& alight on a tree from which
at the same instant a small bird-perhaps
a creeper or nuthatch flitted timidly away-
The shrike was ap. in pursuit.
We go wading through snows now
up the bleak river-in the face of
a cutting N . W. wind \& driving snow storm-
turning now this ear then that to the
\& our gloved hands in our bosoms or pockets
wind-^ Our tracks are obliterated before
we come back. How different this
from sailing or paddling up the
stream here in July-or poling amid
Yet still, in one square rod where they have got out ice \& a
the rocks! thin transparent ice has formed, I can see the pebbly bottom the same as in summer.
It is a cold \& windy Sunday-the
whistles round the N. W. corner of the house \&
wind ^ penetrates every crevice of the
house \& consumes the wood in
the stoves-soon blows it all away.
whisks round the corner of the house-in at a crevice-\& flirts
An arm-ful goes but little way- Such
off with all the heat before we have begun to
a day makes a great hole in the feel it.
wood-pile.
but a few inches deep
Some of the low drifts $\bar{\wedge}^{2}$ made by the
surface snow blowing-over the river especially, are of a fine pure snow so
densely packed that our feet make hardly
any impression on them
River still tight at Merricks.

[^48]There comes a deep snow in midwinter covering up the ordinary food of many birds \& quadrupeds-but anon a high wind scatters the seeds \& birch \& alder \&c of pines \& hemlocks ${ }^{\wedge}$ far \& wide over the surface of the snow for them.

You may now observe plainly the habit of the rabbits to run in paths about the swamps.
Mr Emerson who returned last week from lecturing on the Mississippiwhere having been gone but a monthtells me that he saw boys skating on the Mississippi-\& on Lake Erie-\& has made on the Hudson-\& has no doubt they are skating on Lake Superior\& prob- at Boston he saw them skating on the Atlantic.

The inside of the gray squirrel, or leaf nests, is of leaves chewed or broken up finely. I see where one, by the snow lodging on it, has helped weigh down a birch.
p 476
In Barber's His't Coll-^ there is a letter by Cotton Mather dated "Boston, $10^{\text {th }}$ Dec. 1717." describing the great snow of the previous February. from which I quote-
"On the twentieth of the last February there came on a snow, which being added unto what had covered the ground a few days before,
made a thicker mantle for our mother
than what was usual: And the storm with it was, for the following day, so violent as to make all communication between the neighbors every where to cease. People, for some hours, could not pass from one side of a street unto another,"-- - - - - "On the $24^{\text {th }}$ day of the month, comes Pelion upon Ossa: Another snow came on which almost buried the memory of the former, with a storm so famous that Heaven laid an interdict on the religious assemblies throughout the country, on this Lord's ${ }^{1}$ day, the like whereunto had never been seen before. The Indians near an hundred years old affirm that their fathers never told them of any thing that equalled it. Vast numbers of cattle were destroyed in this calamity. Whereof some there were, of the stranger $\}\}$ [stronger? mine] sort, were found standing dead on their legs, as if they had been alive many weeks after, when the snow melted away. And others had their eyes glazed over with eyes at such a rate, that being not far from the sea, their mistake of their way drowned them there. One gentleman, on Whose farms were now lost above 1100 sheep, which with other cattle, were interred (shall I say) or innived, in the snow, writes me word that there were two sheep very singularly circumstanced. For no less than $8 \& 20$ days
after the storm, the people pulling out
the ruins of above an 100 sheep out of a snow bank which lay 16 foot high, drifted over them, there was 2 found alive, which had been there all this time, \& kept themselveslves alive by eating the wool of their dead companions. When they were taken out they shed their own fleeces, but soon got into good care again."

- -"A man had a couple of young hogs, which he gave over for dead, but on the $27^{\text {th }}$ day after their burial, they made their way out of a snow-bank, at the bottom of which they had found a little tansy to feed upon."--"Hens were found alive after 7 days; Turkeys were found alive after 5 \& 20 days, buried in the snow, \& at a distance from the ground, \& altogether destitute of anything to feed them."- -
-"The wild creatures of the woods, the outgoings of the evening, made their descent as well as they could in this time of scarcity for them towards the sea-side. A vast multitude of deer, for the same cause, taking the same course, \& the deep snow spoiling them of their only defence, which is to run, they became such a prey to these devourers, that it is thought not one in 20 escaped." - - -"It is incredible how much damage is done to the orchards, for
the snow freezing to a crust, as high as the bows of the trees, anon split them to pieces. The cattle also, walking on the crusted snow a dozen foot from the ground, so fed upon the trees as very much to damnify them."-
"Cottages were totally covered with the snow, \& not the very tops of their chimneys to be seen"- These "odd accidents" he says "would afford a story. But there not being any relation to Philosophy in them, I forbear them." He little thought that his simple testimony to such facts as the above-could be worth all the philosophy he might dream of.

Feb. $4^{\text {th }}$
Pm to Walden-
I go to walk-at 3 Pm thermometer $-18^{\circ}-$ $\& 22^{\circ}-$
It has been about this at this hour-for a week or 2- All the light snow, some 5 inches above the crust, is adrift these days-\& driving over the fields like steam -or like the foam streaks on a flooded meadow-from NW to SE. The surface of the fields is rough-like a lake agitated by the wind. I see that the partridges feed quite extensively on the sumach berries-e.g. at my old house-they come to them after every snow-making fresh tracks \& leave now stript many bushes quite bare.

At tanager glade I see where
bark of the
the rabbits have gnawed the ${ }^{\wedge}$ shrub oaks extensively \& the twigs down to the size of a goose quil cutting them off as smoothly as a knife. They have have also gnawed some young white oaks-black-cherry\& apple- The shrub oaks look like hedges which have been trimmed-or clipt.

I have often wondered how red cedar
could have sprung up in some pastures which I knew to be miles distant from the nearest fruit-bearing cedar-but it \& barberries \&c now occurs to me that these ${ }^{1} \wedge$ may be planted by the crows-and prob. other birds. - The oak leaves which have blown over the snow are collected in dense heaps on the still side of the bays at Walden -where I suspect they make warm beds for the rabbits to squat on.

$$
\text { Feb } 5^{\text {th }}
$$

The weather is still clear-cold-\& un-relenting- I have walked much on the river this winter-but, ever since it froze over-it has been on a snow clad river-or pond- They have been river walks-because the snow was shallowest there- Even ${ }^{2}$ the meadows onac. of the firmer crust, have been more passable than the uplands- In the afternoons I have walked off freely

[^49]up or down the river without impediment or fear-looking for birds \& birds' nests \& the tracks of animals-and as often as it was written over-a new snow came \& presented a new blank page- If it were still after it, the tracks were beautifully distinct- If strong winds blewthe dry leaves losing their holds-traversed \& scored it in all directions.

The sleighing would have been excellent all the month past if it had not been for the drifting of the surface snow into the track whenever the wind blow-but that crust on the old snow-has prevented very deep drifts I should the average cold was about $8^{\circ}+$ at $8^{1} \mathrm{Am} \& 18^{\circ}$ or $20^{\circ}+$ at 3 Pm . Feb 6 ${ }^{\text {th }}$ ' 56
Pm to Walden- The down is just peeping //
out from some of the aspen buds- Cut a cake of ice out of the middle of Walden, within 3 rods of where I cut on the $18^{\text {th }}$ of Jan. The snow was about an inch deep only-so fast has it been converted into snow ice. I was obliged to make a hole about 4 feet square in order to get out a cake, \& with ${ }^{2}$ great care to approach the water evenly on all sides so that I might have the less chopping to do after the water began to rush in, which would wet me through. It was surprising with what violence the water rushed in
as soon as a hole was made-under the pressure of that body of ice. On the $18^{\text {th }}$ of Jan. the ice had been about 7 inches thick here-about 4 being snow ice \& about 3 water ice- It was // now 19 inches thick 11 1/2-1 being snow ice \& $71 / 2+$ water ice. Supposing it an inch thick only here when the snow began to fall on it (for it began to fall almost immediately) it had increased it since that time $61 / 2+$ inches downward \& 11 1/2-2 upward- Since the $18^{\text {th }}$ of Jan,- 3 when there was 10 inches of snow on it it had increased about 4 1/2 downward\& about $71 / 2$ upward. I was not prepared to find that any ice had formed on the underside since the $18^{\text {th }}$. The water ice was very crystaline. This ice was thicker than the snow has been in open fields any time this winter- Yet this winter has been remarkable for the abundance of snow. I also cut through \& measured in the Ice Heap CoveThe snow ice was $121 / 4$ \& the water ice about 6 -but perhaps a little was broken off in cutting through the last- In all about $181 / 4$ inch. I was not prepared to find it thickest in the middle. Earlier ${ }^{4}$ in the winter-or on the $18^{\text {th }}$ Jan. it was thickest near the shore.

Goodwin says that he has caught 2 crows
this winter in his traps set in water for mink, \& baited with fish- The crows prob. put to it for food \& looking along the very few open brooks attracted by this bait got their feet into the traps. He thinks that I call muskrat tracks are mink tracks by the Rock-\& that muskrat do not come out at all this weather- I saw a clamshell opened \& they say minks do not open them (?) Feb $7^{\text {th }}$
Began to snow at 8 Am-turned to rain //
at noon \& cleared off or rather ceased raining at night-with some glaze on the trees. though slight
This the first thawing $\wedge$ since the $25^{\text {th }}(?)$ of Decemem $\{-\}$
ber- During the rain the air was thick-
the distant woods-bluish-and the single
trees \&c on the hill under the dull mist
covered sky remarkably distinct \& blackFeb $8^{\text {th }}$
9 Am to Fair Haven Pond-
A clear \& a pleasanter \& warmer day
than we have had for a long time. The (at noon)
snow begins ^ to soften somewhat in the road.
For 2 or 3 weeks successive light \&
dry snows have fallen on the old crust \& been drifting about on it-leaving it at last $3 / 4$ bare $\&$ forming drifts against the fences \&c or here \& there low slaty.-fractured ones in mid field
or pure white hard-packed ones. These drifts
on the crust are commonly quite low
\& flat. But yesterdays snow turning
to rain which froze as it fell-there
giving them a hoary look
// is now a glaze on the trees ${ }^{1}$ icicles
like rakes' teeth on the rails-and a thint crust over all the snow- At
this hour the crust sparkles with a myriad brilliant points or mirrors-one to every 6 inches at least- This crust is cracked like ice into irregular figures a foot or two square. Perhaps the snow has settled considerably-for the track in the roads is the highest part. Some heard a loud cracking in the ground or ice last night.
I cut through -5 or 6 rods from the E shore of Fair Haven-\& find 7 inches of snow-9 inches
// of snow ice \& 8 of water ice- 17 of both.
The water rises to within $1 / 2$ inch of the top of the ice.
Isaac Garfield has cut a dozen holes on the west side- The ice there averages
// 19 inches in thickness- Half the holes
are 5 or 6 rods from the shore-\& the rest 9 or 10-the water from 3 to 7 feet

In some places more than half the whole depth is ice
deep- ^ The thinnest ice is 17 inches
the thickest $20+$. The inner row

In the mid of river in front of our house same day it is $131 / 4$ inches thick only 5 of it snow ice-it having been late to freeze there, comparatively.
invariably the thickest. The water rises above
the ice in some cases.
Edward \& Issac Garfield were fishing
there-\& Puffer came along-\& afterward
He cannot get near the
Lewis Miner with his gun. partridges on ac. of the cracklings of the crust.
I saw the last 2 approaching with my glass
The fishermen agree in saying that the pickerel have generally been eating, \& are full, when they bite. Puffer thinks they eat a good deal, but seldom.
Some think it best to cut the holes the day-before-that because the noise frightens them. \& the crackling of the crust today-was thought to frighten them- E. Garfield says that his uncle Daniel was once scaling a pickerel when he pricked his finger against the horn of a pout which the pickerel had swallowed. He himself killed a pickerel with a paddle in the act of swallowing a large perch- Puffer had taken a striped snake out of one.

They send to Lowell ${ }^{1}$ for their bait, \& fishermen send thither from far \& wide, so that there is not a sufficient supply for them.
I. Garfield once caught an eel there with his pickerel bait-through the icealso speared a trout that weighed 2 or $31 / 2 \mathrm{lbs}-$ he says-off Well meadow-
E. Garfield says that he was just turning into the pond from up stream when he heard a loud sound \& saw and caught there 2 great mud turtles- He let the boat drift down upon them,

One had got the other by the neck-\& their shells were thumping together- $\&$ their tails sticking up- He caught one in each hand suddenly, \& succeeded in getting them into the boat-only by turning them over-since they resisted with their claws against the side-then stood on them turned overpaddled to nearest shore-pulled his boat up with his heel-\& taking a tail in each hand walked backward through the meadow in water a foot deep, dragging them. Then carried one a few rods, left hime \& returned for the other-\& so on- One weighed 43 \& the other 47 pounds-together 90- Puffer said that he never saw 2 together so heavy- I. Garfield said that he had seen one that weighed 63 lbs . All referred to the time when (about 15 years ago-one said the year of the Bunker Hill monument celebration) Some 40 were found dead on the meadows between there \& Sudbury- It was about the end of March \& Puffer inferred that they had come out thus early from the river \& the water going down the ice had settled on them \& killed them-but the Garfields thought that the ice which tore up the meadows very much that year-exposed them \& so they froze- I think the last most
likely. Puffer searches for them in May under
\& calls one of the small
the cranberry vines with a spear- kinds the "grass tortoise"
E. Garfield says that he saw the
other day where a fox had caught in the snow 3 partridges \& eaten 2 -he himself last winter caught 2 on the hill side $S$ of F. Haven with his hands- They flew before him\& dived into the snow,-which was about a foot deep-going $2^{\text {ce }}$ their length into itHe thrust his hand in \& caught them. Puffer said that his companion one night speared a partridge on the alders on the $S$ side the pond.
E. Garfield says there were many quails here last fall-but that they are suffering now-
One night as he was spearing in Conant's Cranberry meadow, just north the pond-his dog caught a shelldrake in the water by the shore.

Some days ago he saw what he thought a hawk as white as snow fly over the pond-

Was it a \{guy-\}falcon
but it-may have been a white owl-(which nest he never saw-) He some times sees a hen hawk in the winter-but never a partridge or other small hawk at this season-

Speaks again of that large speckled hawk he killed once-which some called a "Cape Eagle"

Had a hum- bird's nest behind their
house last summer-\& was amused to see the bird drive off other birds-would pursue a robin \& alight on his back--let none come near- I Garfield saw ones nest on a horizontal branch of a white-pine near the Charles Miles house about 7 feet from ground.

E Garfield garfield spoke of the wren's nest as not uncommon hung in the grass at the meadows-\& how swiftly \& easily the bird would run through a winnow of hay.

Puffer saw a couple of foxes cross the pond a few days ago- The Wheelwright in the corner saw 4 at once about the same time.

They think that most squirrel tracks now are of the gray ones-that they do not lay up anything- Their tracks are much larger than those of the red. Puffer says that 5 gray squirrels came out of one of their leafy nests in a mid-sized white pine, after it was cut down behind the Harrington house the other day-\& a day or 2 after 3 out of another. He says that they too use bark in making their nests-as well leaves-the inner bark old
of ^ chestnut rails-which looks like seaweed.
E. Garfield says the Chip squirrels come out this month-.
Puffer saw a star-nosed mole yesterday in the road its track was $\quad ., \ldots, \cdot$, dog-like

Coming home at 12-the ice is fast melting on the trees \& I see in the drops the colors of all the gems- The snow is soft \& the eaves begin to run
as not for many weeks.
Therm. at $31 / 2 \mathrm{Pm} 31^{\circ}+$
Puffer once found the nest of what he calls the deer mouse (prob. jumping) in pile of wood at what is now R. Rice's place in Sudbury-\& the old one carried off 9 young
clinging to her teats. These men do not chop now-they say because the snow is so deep \& the crust cuts their legs.
Mr Pritchard tells me that he remembers
a 6 weeks of more uninteruptedly severe cold than we have just \& that was in ' 31 end ing the middle of January-the eaves on the $S$ side of his huse did not once run during that period-but they have run or dripped a trifle on several days during the past 6 weeks.

Daniel (?)
Puffer says that he and ${ }^{\wedge}$ Haynes set lines once when there was good skating in all the bays from the Long cause-way in Sudbury down to the RR. bridgebut caught only 2 or 3 perch. Feb $9^{\text {th }} 56$.
How much the NW. wind prevails in the winter-almost all our storms come from that quarter \& the ridges of snow drifts run that way- If the Ind. placed their heaven in the SW-on ac. of the warmth of the SW wind-they might have made a stern winter god of the N. W. wind.

Pm up Assabet
$31 / 2 \mathrm{Pm}$. Therm. $30^{\circ}+$ This \& yesterday comparatively warm weather $-1 / 2$ inch of // snow fell this fore noon-but now it has
cleared up. I see a few squirrel tracks
but no mice tracks for no night
has intervened since the snow. It is
only where the river washes a wooded bank
that I see mice or even squirrel tracks
$\{-\}$ elsewhere only where dogs \& foxes have traversed
it- E.G. there are no tracks on the side
of the river against Hosmers \& Emerson's land
though many alders \&c there-but many
tracks commonly on the opposite wooded side.
In the swamp west of pigeon rock-I see
where the rabbits have bitten off the Swamp-
white oak sprouts-where they have sprung up tender looking like poplar-from stocks broken by the ice last winter. I hear a
// pheobe note from a chicadee
// Saw a pensile nest 18 feet high within
a lichen clad red maple on the edge
pink
of the Assabet Spring or ^ azalea swampIt looked very much like a bunch of the
lichens dangling-\& I was not sure it was not till I climbed up to it. Without it was chiefly the coarse greenish lichens of the maple-bound with coarse bits of bark-\& perhaps bleached milkweed bark (??) \& brown coccoon silk-\& within a thin lining of pine needles hemlock twigs \& the like. Was it a Yel- throat vireo's-? It was not shaped like the red eye's-bu
side wise On a side twig to one of the
limbs \& about a foot from the end of the twig.

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\text { Feb- } 10^{\text {th }} 56
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Speaking about the weather \& the fishing-with E \& I- Garfield on the $8^{\text {th }}$ ult I was amused to hear these 2 young farmers suddenly disputing as to whether the ${ }^{1}$ moon (? $)^{2}$, if that be it, was in the Feet-or the Head or elsewhere. Though I know far more of astronomy than they, I should not know how at once to find out this nonsense in an almanac- Yet they talk very glibly about it, \& go a fishing accordingly. Again in the evening of the same day I overtook Mr Pritchard \& observed that it was time for a thaw-but said he-"That does not look like itin the west $\{-\}$
(pointing to the new moon ${ }^{\wedge}$ ) in the You you could hang a powder horn upon that pretty well-" Pm
To Walden- Returning I saw a fox on the railroad at the crossing below the shanty-site -8 or 9 rods from me. He looked of a dirty yellow \& lean. I did not notice the white tip to his tailSeeing me he pricked up his ears-\& at first ran up \& along the E bank
on the crust-then changed his mind \& came down the steep bank crossed the RR before me-\& gliding up the west bank disappeared in the woods- He coursed or glided along easily-appearing not to lift his feet high-leaping over obstacleswith his tail extended straight behindHe leaped over the ridge of snow about 2 feet high \& 3 wide-between the tracks very easily \& gracefully. I followed examining his tracks- There was about a quarter of an inch of recent snow above the crust-but for the most part he broke in 2 or 3 inches- I slumped from 1 to 3 feet. His tracks when running, as I have described, were like this-
being about 2 by 5 inches
$\bigcirc \quad \infty \quad \infty$ as if he slid a little-no marks of toes being seen
in that shallow snow-the greatest interval above-1 foot-Soon after thus The greatest $000^{0} \quad 00$ interval some-
times 4 feet even. Sometimes the 3 tracks merged together where the crust broke-


When walking at ease before he saw me his tracks were more round-and nearer together-(about 2 inch $\times 2$ 1/2)
thus

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08000000
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Sometimes I thought his tail had scraped the snow-
He went off at an easy gliding pace such as he might keep up for a long time-pretty direct after his first turning. Feb 11 ${ }^{\text {th }}$
Pm to Fair Haven Pond by River ${ }^{1}$
Israel Rice says that he does not
know that he can remember a winter
when we had as much snow as we
Eb. Conant says as much excepting the
have had this winter. year when he was 25 -about 1803 .
It is now fairly thawing-the eaves //
running \& puddles stand in some places-
The boys can make snow balls- \& the horses begin to slump occassionally.

Saw a partridge by the river side
opposite F. H. Hill which at first
I mistook for the top of a fence post
above the snow-amid some alders-I
4 rods off
shouted \& waved my hand ${ }^{\wedge}$ to see if it was one-but there was no motion \& I thought surely it must be a postNevertheless I resolved to investigateWithin 3 rods I saw it to be indeed a partridge to my surpriseS-standing perfectly still with its head erect \& neck out

[^50]stretched upward- It was as complete a deception as if it had designedly placed itself on the lig line of the fence \& in the proper place for a post. It finally stepped off daintily with a tetering gait \& head up-\& took to wing. I thought it would be a thawing day by the sound-the peculiar sound-of cockcrowing in the morning.

It will indicate what steady cold
weather we have had to say that the lodging snow of Jan $13^{\text {th }}$ (though it did not lodge remarkably) has not yet completely melted off the sturdy trunks of large trees-

Feb. 1256
Thawed all day yesterday-\& rained some-
// what last night, clearing off this morning.
Heard the eaves drop all night
The Thermometer at $81 / 2 \mathrm{Am}-42^{\circ}+$ or crust
The snow ^ \& cold weather began Dec $26^{\text {th }}$ \& not till Feb $7^{\text {th }}$ was there any considerable relenting when it rained a little-i.e. 43 days of uninterrupted cold weather\& no serious thaw till the $11^{\text {th }}$ or yesterday. How different the sun light over thawing snow-from the same over dry frozen snow. The former excites me strangely \& I experience a spring-like
melting in my thoughts. Water now stands above the ice \& snow on the river.

I find on shovelling away the snow that there is about 2 inches of solid ice at the bottom-that thin crusted snow of Dec $26^{\text {th }}$ These 2 inches must // be added then to my measures of Jan $12^{\text {th }}-16^{\text {th }}-$ $23^{\text {d }}-29^{\text {th }}-\& 30$ To day I find it has settled since the $29^{\text {th }}$, owing of course mainly to the rain of the $7^{\text {th }}$ ult \& espically of last night, about 2 inches in open land-\& $11 / 2$ inches in Trillium woodsThus W of RR E of RR Trill. Woods


14
There has been scarcely any loss on the W side of RR-but 3 3/4 on the E side- It may be owing to the drifting since the $29^{\text {th }}$ From Jan $6^{\text {th }}$ to Jan 13 not less than a foot of snow on a level in open land-

V forward Mar. 19
\& from Jan $13^{\text {th }}$ to Feb $7^{\text {th }} \wedge$ not less than 16 inches on a level at any one time in open land-\& still there is 14 on a level.
That is for 25 days the snow was 16 inches deep in open land!!

[^51]Feb $13^{\text {th }}$
Grew cold again last night-with high
wind- The wind began about mid-day- I think a high wind commonly follows rain or a thaw in winter- The thermometer at $81 / 2 \mathrm{Am}$ is
// at zero. (at $1 \mathrm{Pm} 8^{\circ}+$ )
This fall of $42^{\circ}$ from $81 / 2 \mathrm{Am}$ yesterday to the same time to day-has produced not thin \& very uneven
// a ^ smooth, but a ${ }^{\wedge}$ firm \& thick ^ crust on which I go in any direction across the fields stepping over the fencesYet there is some slosh at the bottom of this snow, above the icy foundation.

Now no doubt many sportsmen are out with their dogs-who have been imprisoned by the depth of the snow. In the woods where there are bushes beneath you still slump more or less-

The crust is quite green with the needles of pitch pines-sometimes whole plumes which have recently fallen- Are these chiefly last years needles brought down by the glaze-or those of the previous year which had not fallen before?

I suspect they are chiefly the former-but may be some of the latter. V. Feb $14^{\text {th }}$ Feb 14
Still colder this morning $7^{0}-1$ at $81 / 2$ Am.

Pm to Walden-
I find that a great many pine needlesboth white \& pitch-of ' 54 still hold on bristling around the twigs, especially if the tree has not grown much the last yearSo those that strew the snow now are of both kinds.

I can now walk on the crust in every direction
at the Andromeda swamp-can run
\& stamp without danger of breaking through raised quite above the andromeda (which is entirely concealed) more than 2 feet above the ground.

But in the woods-\& even in wood paths-I slump at every other step.

In all the little valleys in the woods \& sproutlands \& on the S. E. sides of hills-the oak ${ }^{1}$ leaves which have blown over the crust are gathered in dry \& warm looking beds often 5 or 6 feet in diameter about the crisply base of the shrub oaks. So clean \& ^ dry \& warm above the cold white crustthey are singularly inviting to my eyeNo doubt they are of service to conceal \& warm the rabbit \& partridge \& other beasts \& birds- They fill every little hollow \& betray thus at a distance a man's tracks made a week ago-or a dogs many rods off on a hill side

If the snow were not crusted they would not be gathered thus in troops.
I walk in the bare maple swamps \& detect the minute pensil nests of some vireo high over my head-in the fork of some unattainable twig where I never suspected them in summer-a little basket cradle that rocked so high in the wind. \& where is that young family now? while their cradle is filled with ice?

I was struck today by the size \& continuousness
of the naturally willow hedge on the E side of the RR. causeway at the foot of the embankment-next to the fence 12
Some $10^{1}$ years ago when that causeway was built through the meadows was built there were no willows there or near there-but now just at the foot of the sand bank-where it meets the meadow \& on the line of the fence-quite a dense willow hedge has planted itself. I used to think that the seeds were brought with the sand from the deep cut in but there is no golden willow there nor indeed in the woods-^ but now I think that the seeds have been blown hither from ${ }^{2}$ lodged a great distance \& lodged against the foot of the bank-just as the snow drift accumulates therefor I see several ash trees among

[^52]them which have come from an ash 10 rods east in the meadow-though none

There are also a few alder elms birch-poplars \& some elderhas sprung up elsewhere. ^ For years a willow might not have been persuaded to take root in that meadow- But run a barrier like this through it \& in a few years it is lined with them. They plant themselves here solely \& not in the open meadow-as exclusively as along the shores of a riverThe sand bank is a shore to them \& the meadow a lake. How impatient, how rampant-how precocious these Osiers-! ${ }^{1}$ They have hardly made 2 shoots from the sand in as many springs-when silvery catkins burst out along them-\& anon golden blossoms-\& downy seeds-spreading their race with incredible rapidity- Thus they multiply \& clan together. Thus they take advantage even of the RRwhich elsewhere disturbs \& invades their domains. May I ever be in as good v n p How tenacious
spirits as a willow. ${ }^{\wedge}$ They never despairIs there no moisture longer in Nature which they can transmute into sap. They are emblems of youth-joy \& everlasting life. Scarcely is their growth restrained by winter but their silvery down peeps forth in the warmest days in January (?)

The very trees \& shrubs \& weeds-if we consider their origin have drifted thus like snow against the fences \& hill sides. Their growth is protected \& favored there. The willow-how tenacious of life-how withy-how soon it gets over its hurts! Soon the alders will take their places with them. This hedge is of course as straight as the rail-road or its bounding fence.
Over this crust alder \& birch \& pine seeds \&c which in summer would have soon found a resting place-are blown far \& wide. Feb $16^{\text {th }}$ ' 56
Pm to Walden-
It has been trying to snow for 2 days-
// about 1 inch fell last night but it
clears up at noon \& sun comes out very warm \& bright. Wild says it is the warmest
day at 12 M since the $22^{\text {nd }}$ of Dec. when the therm. stood at $50^{\circ}+$ today it is at 44. I hear the eaves running before I come out-\& our thermometer at 2 Pm is $38^{\circ}+$. The sun is most pleasantly warm on my cheek-the melting snow shines in the ruts-the cocks crow more than usual in barns-my great coat is an incumbrance- There is ${ }^{1}$ no down visible on // the sallows when I descend the E side
of the RR-unless a scale has come off.
Where I measured the ice in the midof Walden on the $6^{\text {th }}$ ult I now measure again, or close by it, though without cutting [prob about same as the $6^{\text {th }}$ when called $7111 / 2^{-1}$ ] out the cake- I find about $111 / 4^{\wedge}$ of snow-ice // \& $211 / 2$ in all-leaving 10 1/4 clear ice. which would make the ice to have increased beneath through all this thickness \& in spite of the thaws $23 / 4^{-2}$ inches
Near the shore in one place it was 22 inches Feb $17^{\text {th }}$
Some 3 or 4 inches of snow fallen in the night //
\& now blowing-
At noon begins to snow again-as well as
\{blow\}- Several more inches fallFeb 18
Yesterday's snow drifting- No cars
from above or below till 1. Pm.
Feb 19 ${ }^{\text {th }}$
Measure snow again-on ac. of what
fell on $17^{\text {th }}$ - //

W of RR E of RR av of Trill. Wood
$15+(+2 \quad 121 / 2-(+2 \quad$ Both $\quad 181 / 2+2(201 / 2$

$$
14+2(16
$$

The great body of the last snow ap. to have settled under the E side of the RR- There are 5 1/2 inches more in the wood than on the $12^{\text {th }}$ ult-\& I think this is about the av. of what fell on the $17^{\text {th }}$ (night \& day) Ac. the snow has been deeper since //

[^53]the 17 than before this winter- I think if the drifts could be fairly measured it might be found to be 17 or 18 inches deep on a level.
This snow, you may say, is all driftedfor in the fields $E$ of the RR there is not so much as there was a week ago, while W there is about 4 inches more.

Feb 20 ${ }^{\text {th }}$ ' 56
P. m. Up Assabet-

See a broad and distinct otter trail made last night or yesterday- It came out to the river through the low woods N of Pinxter swamp-making a very conspicuous trail from 7 to 9 or 10
or 4
inches wide \& 3 ^ deep-with sometimes singularly upright sides-as if a square - لـ
timber had been drawn along ${ }^{\wedge}$-but commonly rounded- $\quad$ It made some short turns \& zig-zags-passed under limbs which were only 5 inches above the snow-not over them-had ap. slid down all banks and declivities-making a uniform broad hollow trail there without any mark of its feet- On reaching the river it had come along under the bank-from time to time looking into the crevices where it might get under the ice there-some times ascending the bank and sliding backOn level ground its trail had this
appearance-


Commonly 7 to 9 or 10 inches wide \& tracks of feet 20 to 24 apart-but sometimes there was no track of the feet for 25
feet-frequently for 6- In the last
case swelled in the outline as above.
op.
Having come down as far as ${ }^{\wedge}$ the Great
white on the hill-it returned on its track \& entered a hole under the ice at Assabet spring from which it has not issued.

Feb $22^{\text {d }\{n d\}}$
Pm to Assabet Stone bridge \& home on river

- It is a pleasant \& warm P. m. \& the
snow is melting- Yet the river is still perfectly
closed-(as it has been for many weeks)
both against Merricks \& in the Assabet-ex-
directly
cepting ^ under this upper Stone bridge-\&
prob at mouth of Loring's Brook ${ }^{1}$. I am
surprised that the warm weather within
10 days has not caused the river to open
at Merricks-but it was too thick
to be melted
Now first-the snow melting \& the ice begining greyish
to soften- I see those slender ${ }^{\wedge}$ winged
with closed wings snow clad
insects creeping ^ over the $\wedge$ ice Perla (?) //
from $1 / 3$ of an inch to an inch long
On all parts of the river of various sizes \&c-\& every warm day afterward-
Have seen none before-this winter.
Have in fact 4 wings / V. Mar. 22
""B" written over "b"

Just below this bridge begins an otter track several days old-yet very distinct which I trace half a mile down the river- In the snow less than an inch deep on the ice each foot makes a track 3 inches wide-ap enlarged in melting-\& the whole 4 appear thus- The clear interval 16 inches -the length occupied by the $408 \quad \circ 8$ feet $=14$ inch. It looks as if some one had dragg $\{\mathrm{eg}\}$ a round timber down the middle of the river a day or or two since-which bounced as it went.
There is now a crack running down the middle of the river \& it is slightly elevated there owing prob to the increasi\{n\}g temperature.

$$
\text { Feb } 23^{\mathrm{d}}
$$

9 Am to F. H. Pond up river-
A still warmer day- The snow is so solid that it still bears me-though we have had several warm suns on it. It is melting gradually under the sun. In the morning I make but little impression in it. As it melts it acquires a rough but regularly waved surface. It is inspiriting to feel the increased heat of the sun reflected from the snow- There is a slight mist above the fields-through
which the crowing of cocks sounds springlike.
I sit by a maple on a maple- It wears the same shaggy coat of lichens summer \& winter.

At 2 Pm the Therm. is $42^{\circ}++47^{\circ}+$ Whenever it is near 40 there is a speedy sotening of the snow.

I read in the papers that the ocean
/ not to bear or walk on/safely
is frozen $-\wedge$ or has been lately-on the bankside of Cape Cod-at the Highland Light one mile out from the shore- A phenomenon which, it is said, the oldest have not witnessed before $-\{-\}$

Feb $24^{\text {th }}$
Dr Jarvis tells me that he thinks there was as much snow as this in ' 35 when he lived in the Parkman House \& drove in his sleigh from Nov $23^{\text {d }}$ to March $30^{\text {th }}$ excepting one day.

$$
\text { Feb } 25^{\text {th }}
$$

Pm. to Walden-\& Fair Haven-
The only bare ground is the RR tracks-where the snow was thin. The crust still bears-\& left the RR. at Andromeda ponds-\& went through on crust to Fair Haven- Was surprised to see some little minnows only an inch long in an open place in Well Meadow Brook- As I stood there saw that they had just felled
my bee tree the hemlock-the chopper even then stood at its foot- I went over \& saw him cut into the cavity by my direction. He broke a piece out of his axe as big as hemlock my nail against a ${ }^{\wedge}$ knot in the meanwhile. There was no comb within.

They have just been cutting wood
at Bittern Cliff-the sweet syrup is out on the ends of the hickory logs there.

Gathered some facts from
Henry Bond's Genealogies of the Families of Watertown \&c-

My mother's mother was Mary Jones, only daughter of-"Col. Elisha Jones, Esq., of Weston. A Boston newspaper, of Feb. $15^{\text {th }}$ 1775, says: 'On Monday last, died, in this town, in the $66^{\text {th }}$ year of his age, Elisha Jones Esq., late of Weston, for many years a magistrate, Col. of a regiment of Militia, and member of the General Assembly. In the many departments in which he acted, he eminently shewed ${ }^{1}$ the man of principle, virtue,' \&c. He married, Jan 24, 1733-4, Mary Allen, and occupied his father's homestead." [Mary Allen was the dr. of Abel Allen-who was the son of Lewis Allen of Watertown Farms who died 1707-8] The children of E Jones \& Mary Allen were 1 Nathan $2^{\text {d }}$ son died in infancy 3 Elisha 4 Israel

## b. 1748

5 Daniel 6 Elias 7 Josiah 8 Silas-9 Mary ^
10 Ephraim 11 Simon (or Simeon) 12 Stephen 13 Jonas
14 Phillemore 15 Charles.
born 1710
Col. Elisha Jones was ^ the son of Capt Josiah
Jones (born 1670 in Weston) \& Abigail Barnes
Capt. Josiah Jones was the son of Josiah Jones of Watertown Farms (born 1643) and Lydia Treadway (dr of Nathaniel Treadway \& Suf who died in Watertown 1689)

Josiah Jones was son of Lewis Jones (who ap-
pears to have moved from Roxbury to Watertown about 1650 ) \&
died 1684) and Anna (perhaps Stone?) This Josiah born in England.
Jones in 1666 bought "of John Stone \& Wife Sarah, of Wat., a farm of 124 acres on the N side of Sudbury highway, about 2 miles from Sud.",Feb 26 ${ }^{\text {th }}$
Pm to Hubb's Close-
I see at bottom of the Millbrook-below
Emersons-2 dead frogs-the brook has part way yet a snowy bridge over it-. Were they left by a mink or killed by cold \& ice? In Hubbard's maple swamp beyond I see the snow within a few days sprinkled with the saw dust like bits of wood under a dead maple where a woodpecker has drilled a handsome round holeExcepting the carrying it downward within it is ready for a nest- May they not have a view to this use even now?

Pm- Up Assabet-
Am surprised to see how the ice lasts on
// the river- It but just begins to be open
for a foot or $\underline{\underline{2}}$ at Merrick's-\&
you see the motion of the stream$\&^{1}$ but it has overflowed the ice for many rods a few feet in width- It has been tight even there (and of course every where else on the main stream-\& on N . Branch except at Loring's Brook \& under Stone bridge) since Jan $25^{\text {th }}$, and elsewhere on the main stream since $J a n 7^{\text {th }}-$ as it still is. That is we may say that the river has been frozen solidly for 7 weeks- On the $25^{\text {th }}$ ult I saw a load of wood drawn by 4 horses up the middle of the river above Fair Haven Pond.
On that day-the $25^{\text {th }}$-they were cutting the last of Baker's woodlot on the $S$ side of Fair Haven- They cut the greater part of it last winter-\& this was the wood they were hauling off.
I see many birch scales freshly blown over the snow- They are falling all winterWhat is that narrow twisted yellowish brown scale-which is seen on the snow all winter near woods? shaped like this
 prob. pine stipule

meadow-a grey-rabbits hind leg-freshly left there-perhaps by a fox.

The papers are talking about the prospect of a war between England \& Americaneither side sees how its country can avoid a long \& fratricidal war without sacrificing its honor- Both nations are ready to take a desperate step-to forget the interests of civilization \& christianity \& their commercial prosperity-\& fly at each other's throats. When I see an individual thus beside himself-thus desperate-ready to shoot or be shot-like a black legwho has little to lose-no serene aims to ac-complish-I think he is a candidate for bedlam- What asylum is there for nations to go to? Nations are thus ready to talk of wars Will it not be thought \{disreputable\} at length \{as duelling between individuals\} \& challenge one another-because they now is?
are made up to such an extent of poor low-spirited despairing men-in whose eyes the chance of shooting somebody else without being shot themselves exceeds their actual good fortune. Who in fact will be the first to enlist but the most desperate class-they who have lost all hope\& they may at last infect the rest.

Minot says that partridges will bud on black birches as on apple trees.

Feb 28 ${ }^{\text {th }}$ ' 56
Pm to Nut Meadow-
Mother says that the cat lay on her
bread one night \& caused it to rise
finely all around her
I go on the crust which we have had since the $13^{\text {th }}-$ i.e. on the solid frozen snow which settles very gradually in the sun-across the fields \& brooks. The very beginning of the river's breaking up-appears to be the oozing of water through cracks in the thinnest places \& standing in the shallow puddles there on the ice-which freeze solid at night. The river \& brooks are quite shrunken. - The brooks flow far under the a foot thick
hollow ice \& snow crust ${ }^{\wedge}$-which here and there has fallen in showing the shrunken stream far below- The surface of the snow melts into a regular waved form-like raised scales.

Miles is repairing the damage done at his new Mill by the dam giving way. He is shovelling out the flume which was half filled with sand-standing in the water. His saw-mill built of slabs reminds me of a new country. He has lost a head of water equal to 2 feet by this accident- Yet
he sets his mill a-going to show me how it works- What a smell as of gunwash when he raised the gateHe calls it the sulphur from the pond-. It must be the carburetted hydrogen gass from the bottom of the pond under the ice. It powerfully a powerful smelling bottle
scents the whole mill. ^ How pleasant are the surroundings of a mill! Here are the logs (pail-stuff) already drawn to the door from a neighboring hill before the mill is in operation- The dammed up meadow the meadow-the melted snow -and welling springs-are the serfs he compells to do his work- He is unruly as yet-has lately broke loose-filled up the flume \& flooded the fields below He uses the dam of an old mill built which stood here a hundred years agowhich now nobody knows anything about. The mill is built of slabs-of the eaten sap-wood. The old dam had probbeen undermined by muskrats- It would have been most prudent to have built a new one. Rude forces-rude men\& rude appliances-
Martial Miles who is there-says that there are many trout in this brookHe sees them running down just before winter-\& at that time Charles Snow
once speared a great many-
one
some weighing 3 or 4 lbs. - He
once came within 4 feet of an otter
at 10 Pm in the middle of the
road by the guide board just north
of this brook- Spoke of the one
shot in a ditch at Donge Hole
as I had heard before-also of the 3 killed-shot-at Farrar's swampThe one who shot them told him that he attempted to kill them with a shovel, but that they would take it out of his hands as often as he attempted it.

Coombs came along with his dog \&
gun on his way to shoot partridges
which will come out to bud this evening on certain young apple trees- He has got 4 or 5 for several nights in succession $-\&$ sees foxes there running about on the crust.
Francis Wheeler says he sold two young foxskins to a tin peddlar today for a dollar - Coombs says they got a silver-gray fox in Lincoln this winter \& sold its skin for 16 dollars!! He says that he
// killed a shelldrake a month or 6 weeks ago in a small open place beneath the falls at the Factory.
This shows what hardy birds they are.
Last summer-he found
a black ducks nest on one of the islands in Lorings Pond ${ }^{1-}$ He saw the duck hide in the grass- Came up \& put his hand on a parcel of feathers \& raising a handful was surprised to find the eggs under them.
How various the talents of men-!
From the brook, in which one lover of nature has never during all his life time detected anything larger than a minnow another extracts a trout that weighs 3 lbs-or an otter 4 feet long.

How much more game he will see who carries a gun-i.e. who goes to see it! Though you roam \{the\} woods all your days-you never will see by chance-what he sees who goes on purpose to see it. One gets his living by shooting wood cocksmost never see one in their lives-

Coombs goes to shoot partridge this evening by a a far off wood side- M Miles goes home to load up-for he is going to Boston with a load of wood tonight.

Our young Maltese cat Min-which cold
has been absent 5 ^ nights-the ground covered deep with crusted snow-her first absence-and given up for dead-has at length returned at day light-awakening the whole house with her mewing
\& afraid of the strange girl we have got in the meanwhile
she is a mere wrack of skin \& bones
-with a sharp nose \& wiry tail
She is as one returned from the dead-
There is as much rejoicing as at the return of the prodigal son-\& if we had a fatted calf we should kill it. Various are the conjectures as to her adventures-whether she has had a fit-been shut up somewhere or losttorn $^{1}$ in pieces by a certain terrier or frozen to death. In the mean while she is fed with the best
saucers of
that the house affords-minced meats \& ^ warmed milk-\& with the aid of unstinted sleep in all laps in succession is fast

He
picking up her crumbs. She has already
found her old place under the stove-and his
is preparing to make a stew of her brains
there.
That strong gun-wash scent from the mill pond water was very encouraging.
I who never partake of the sacrament make the more of it.
How simple the machinery of the mill-
Miles has dammed a stream-raised a pond or horizontal
head of water \& placed an old ${ }^{\wedge}$ mill-wheel in position to receive a jet of water in its buckets-transferred the motion to a
horizontal shaft \& saw by a few cogwheels \& simple gearing \& throwing a roof of slabs over all-at the outlet of the pond- You have a mill.

Returning on the crust over
Puffer's place-I saw a fine plump
hen hanging from an apple tree \& a crow from another-prob. poisoned to kill foxes with- A hen which prob. a fox had killed.
Stopped at Martial Miles' to taste his cidermarvellously sweet \& spirited without being bottled
-alum \& mustard put into the barrels.
A weight of water stored up in a meadow, applied to move a saw-which scratches its way through the trees placed before it. So simple is a saw-mill A mill wright comes \& builds a dam across the part of the meadow-\& a mill pond is created-in which at length fishes of various kinds are found-(The pond is like a weight wound up.) \& muskrats \& minks \& otter frequent it. Feb 29 ${ }^{\text {th }} 56$
Minot told me this P. m. of his catching a pickerel in the mill brook once-before the pond was drawn off-when the brook had 4 or 5 times as much water as nowwhich weighed 4 lbs- Says they stayed in it all winter in those days- This was near his land up the brook- He once when fishing for pickerel also caught there $\wedge$ a trout which weighed $31 / 2$ lbs-he fell within 2 feet of the waterbut succeeded in tossing him higher up-

When cutting peat thereabouts he saw a stinkpot turtle in the water eating a frog which it had just caught.

Speaks of seeing a mink swimming along
a little in his beech wood lot-\& from time to long running along the shore -part way up an alder \& down again

He loves to recall his hunting days \& adventures- And I willingly listen to the stories he has told me half a dozen times already. One day he saw about 20 black ducks on Goose Pond \& stole down on them thinking to get a shot-but it chanced that a stray dog scared them up before he was ready. He stood on the point of the neck of land between the ponds \& watched them as they flew high toward Flint's Pond. As he looked he saw one separate from the flock when they had got half way to Flint's Pond-or half a mile\& return straight toward Goose Pond again. He thought he would await him \& give him a shot if he came near enough- As he flew pretty near rather
\& ${ }^{\wedge}$ low-he fired-whereupon the duck rose right up high into the air, \& he saw by his motions that he was wounded- Suddenly he
dropped like a stone ${ }^{1}$-by a slanting fall into the point of a thick pine wood-\& he heard him plainly strike the ground like a stone. He went there \& searched for long time-\& was about giving it up-when at length he saw the duck-standing still alive \& bleeding by the side of a stump-\& made out before he could to kill him with a stick. reach the water. He said he saw Emerson come home from lecturing the other day with his knitting bag (lecture bag) in his hand. He asked him if the lecturing business was as good as it used-to be- Emerson said he did'nt see but it was as good as everguessed the people would want lectures "as long as he or I lived."

Told again of the partridge hawk striking down a partridge which rose before him \& flew across the run in the beech woods.-how suddenly he did it-\& he hearing the fluttering of the partridge came up \& Secured ${ }^{2}$ it while the hawk kept out of gun shot. March $1^{\text {st }}$ ' 56
9 Am to Flints Pond via Waldenby RR-\& the crust. I hear the hens cackle as not before for many months. Are they not now beginning to lay?

The catkins of the willow by the causeway
\& of the aspens-ap to have pushed out a little further than a month ago.
I see the down of half a dozen on that willow by the causeway- On the aspens pretty
generally. As I go through
the cut-it is still, warm, \& more
spring like
or less sunny-^ (about $40^{\circ}+$ ) \& the sand \& reddish subsoil is bare for about a rod in width-on the RR-I hear
// several times the fine drawn phe-be note of the chicadee-which I heard only once during the winter-Singular that I should hear this on the first spring day.

I see a pitch pine seed with its wing far out on Walden- Going down the hill to Goose Pond I slump now \& then. Those dense dry beds of leaves are gathered especially about the leafy tops of young oaks which are bent over \& held down by the snowThey lie up particularly light \& crisp.

The birch stubs stand around Goose-pond-killed by the water a year or 2 ago 5 o\{r\} 6 feet high \& thickly-as if they were an irregular stake fence a rod out.

Going up the hill again I slump in up to my middle.

At Flints I find haf a dozen fishing
The pond cracks a very little while I am
there say at half past 10 . I think I
never saw the ice so thick-it measures just 2 feet thick in ${ }^{1}$ shallow water 20 rods from shore.

Goodwin says that somewhere where he lived they called cherry-birds portroyals.

Haynes of Sudbury brought some axe helves
which he had been making to Smith's shop to sell today- Those made by hand are considered stronger than those which are turned because their forms outline conforms to the grain. They told him they had not sold any ${ }^{2}$ of the last yet- "Well", said he, "you may depend on it you will. They've got to come after them yet-for they haven't been able to get into the woods this winter on account of the snow-\& they'll have to do all their chopping this month."

I like to see the farmer whittling his own axe-helve, as I did E. Hosmer a white oak one on the $27^{\text {th }}$ ult.

It is remarkable, that though I have not been able to find any open place in the river almost all winter-except under the further Stone Bridge \& at Loring's Brook-this winter winter so remarkable for ice \& snow-that Coombs should (as he says) have killed 2 shell drakes at the falls by the factory-a place
which I had forgotten-some 4 or 6 weeks a-go-Singular that this hardy bird should found
have ^ this small opening, which I had forgotten, while the ice every where else was from 1 to 2 feet thick\& the snow 16 inches on a level- If there is a crack-amid the rocks of some water fall this bright diver is sure to know it. Ask the shelldrake if whether the rivers are completely sealed up-

$$
\text { Mar. } 2^{\text {nd }} 56
$$

// Has snowed 3 or 4 inches-very damp snow in the night-stop about 9 Am . This will prob help carry off the old snow so solid \& deepP. m. Walking up the river by Prichards am surprised to see on the snow over the river a great many seeds and scales of birches-though the snow had so recently fallen, there had been but little wind, \& it was already spring. There was one seed or scale to a square foot-yet the nearest birches were about 15 of them along the wall 30 rods east.
As I advanced toward them the seeds became thicker \& thicker till they quite discolored the snow half a dozen rods distant. -while east of the birches there was not
one. The birches ap. not to have lost a quarter of their seeds yet- As I went home up the river I saw some of the seeds 40 rods off- \& perhaps in a more favorable direction I might have found them much further. It suggested how unwearied Nature is spreading her seeds- Even the spring does not find her unprovided with birch-aye \& alder \& \{pine\} seed-A great proportion of the seed that was carried to a distance lodged in the hollow over the river-\& when the river breaks up will be carried far away to distant shores \& meadows.

The opening in the river at Merricks is now
increased to 10 feet in width in some places.
I can hardly believe that henhawks may be beginning to build their nests //
now-yet their ${ }^{1}$ young were a fortnight old the last of April last year-

Mar $3^{\mathrm{d} 2}$ To Cambridge
Mar $4^{\text {th3 }}$ - To Carlisle- Surveying.
I had 2 friends. The one
offered me friendship on such terms
that I could not accept it, without
a sense of degradation- He would not
meet me on equal terms-but
only be to some extent my patron.
He would not come to see me, but

[^54]was hurt if I did not visit him- He
would not readily accept a favorbut would gladly confer one- He treated me with ceremony occasionally-though he could be simple \& downright some-times.-and from time to time acted a part treating me as if I were a distinguished stranger- Was ${ }^{1}$ on stiltsusing made words. Our relation was one long tragedy-for I ${ }^{2}$ did not directly speak of it.- I do not believe in complaint, nor in explanation The whole is but too plain alas already. We grieve that we do not love each other-that we cannot confide in each other. I could not bring myself to speak and so recognize an obstacle to our affectionI had another friend, who through a slight obtuseness perchance did not recognize a fact-which the dignity of friendship would by no means allow me to descend so far as inevitable
to speak off-\& yet the ^ effect of that ignorance was to hold us apart forever. Mar $5^{\text {th }}$ ' 56

Went to Carlisle-surveying

It is very bad turning out there is so much snow in the road- Your horse springs \& flounders in it. The snow in the woodlot which I measured was about 2 feet on a level.

Mar $6^{\text {th }}$
P. m. Up Assabet-

The snow is softening- Methinks the lichens are a little greener for it. A slight thaw comes \& then the birches which were grey on their white ground before-appear prettily clothed in green- I see various kinds of insects out on the snow now- On // the rock this side the leaning hemlocksis the track of an otter. He has left some scentless jelly like substance $11 / 2$ inches in diameter there-yellowish beneath-maybe part of a fish-or clam (?) or himself-

The leaves still hanging on some perhaps young swamp white oaks are remarkably fresh almost ochre colored brown.

See the snow discolored yellowish under high
a prob. gray squirrel's nest ${ }^{\wedge}$ in a pitch pine \& acorn shells about on it.

Also a squirrel's track-on the snow over Lee's Hill ${ }^{1}$. The outside toe on the fore feet is nearly at right angles with the others. This also distinguishes it from a rabbit's track. It visits each apple tree-
digs up frozen apples \& sometimes fil-berts-\& when it starts again aims for an apple tree $\{\uparrow\}$-though 15 rods distant.

Mar. $7^{\text {th }} .56$
Pm. Measured snow on account of snow which fell $2^{\text {nd }} \& 4^{\text {th }}$

W of RR E of RR Av. say Trill. Wood ${ }^{1} 21$ 16+
// 151/2 $16 \quad 16+$
Prob. quite as deep as any time before, this year- There are still 2 or more inches of ice next the ground in open land-
// I may say that there has not been less than 16 inches of snow on a level in open land-since Jan.
$13^{\text {th }}$-unless there ${ }^{2}$ was a little less just before the snow of the $2^{\text {nd }}$ ult-certainly not less than 15 inches. in some cases
? My stick entered the earth \& for the most part in the wood as it has not done before. There has been some thawing under the snow

Mar $9^{\text {th }}$
! Thermometer at $2 \mathrm{pm} 15+^{\circ} 16$ inches hard \& dry
of snow on a level in open fields ${ }^{\wedge}$-ice
in Flint's Pond 2 feet thick-and
the aspect of the earth is that of
the middle of January in a severe
winter. Yet this is about the date that
A Pail of water froze nearly $1 / 2$ inch
blue-birds arrive commonly. thick in my chamber with fire raked up.
The train which should have got down last night did not arrive till ${ }^{3}$
this Pm. (Sunday) having stuck in a drift
Mar $10^{\text {th }}$
// Thermometer at $7 \mathrm{Am} 6^{\circ}$ below zero.
Dr Bartletts between $641 / 2 \& 7 \mathrm{Am}$ was at $13^{\circ}-5$
Smith's at 13 or $14^{\circ}-6$ at 6 Am .
Pm up river to Hubbard Bridge
Thermometer $9^{\circ}+$ at $31 / 2 \mathrm{pm}$ (the same when

[^55]I return at 5) The snow hard \& dry-squeaking under the feet-excellent sleighing-A
biting NW wind compells to cover the ears- It is one of the hardest days of the year to bear-

Truly a memorable $10^{\text {th }}$ of March- There is no opening yet in the main stream at Prichards-Hub Bath-or the Clam Shell or
\{nør¹\} prob. anywhere but at Merrick's-\&
that a dozen rods long by 10 feet.
And it is tight \& strong under the bridges
A blue bird would look as much out of place now as the $10^{\text {th }}$ of January. I suspect that in speaking of the springing of plants in previous years I have been inclined to make them start too early generally.
The ice on Ponds is as solid as everThere has been no softening of it- Now is a good time to begin to cut-only its great thickness would hinder you. The blue shadows on snow are as fine as ever. It is hard to believe the records of previous years-
I have not seen a tree-sparrow methinks since January- Probably the woods have been so generally buried by the snow this winter, that they have migrated further south. There has not been one in the yard the past winter-nor a red-poll.
I saw perhaps one red-poll in the town // that is all.
pinched
The $\wedge$ crows are feeding in the road today in front of the house-\& alighting on

[^56]\& blue jays also
the elms ${ }^{\wedge}$ as as in the middle of the hardest winter-for such is this weather- The blue jays hop about in yardsThe past has been a winter of such unmitigated severity that I have not chanced to notice a snow-flea-which \{are so\} coming in thawing days. ${ }^{1}$ I go over the fields now in any direction sinking but an inch or two to the old solid snow of the winter.

In the road you are on a level with the fences-and often considerably higher-that sometimes where it is a level causeway in summer you climb up \& coast down great swells of hard frozen snow-much higher than the fencesI may say that I have not had to climb a fence this winter but have stepped over them on the snow-

Think of the art of printing what miracles it has accomplished ${ }^{2}-$ covered the very waste paper which flutters under our feet like leaves \& is almost as cheap-a stuff now commonly put to the most trivial uses-with thoughts \& poetry. The wood chopper reads the wisdom of ages recorded on the paper that holds his dinnerthen lights his pipe with it- When we ask for a scrap of paper
for the most trivial use it may
have the confessions of Augustine or the sonnets of Shakespeare-\& we won't observe it- The student kindles his
fire, the editor packs his trunk, the sportsman loads his gun-the traveller wraps his dinner-the Irishman papers his shanty-the school boy daub peppers
the belle pins up her hair
the plastering $\wedge$-with the printed
thoughts ${ }^{1}$ of men-Surely he who can see so large a portion of earth's surface \{found\} thus darkened with the record of human thought \& experience-\& feel no desire to learn to read $\mathrm{it}^{2}$-is without curiosity. He who cannot read-is yet worse than deaf \& blind-is yet but half alive-is still born.

Still there is little or no choppingfor it will not pay to shovel the snow away from the trees-unless they are quite large-\& then you must work standing in it 2 feet deep- There is an eddy about the large trees beside which produces a hollow in the snow it lies close up to
about them-but ^ the small ones on every side.

10 Pm Therm. at zero //
I read, when last at Cambridge, in the
Philad. Phil. trans. that in the cold winter
of 1780-many shell-fish-frogs-^ \&c as well as birds \& plants perished.

$$
\text { Mar } 11^{\text {th }} 56
$$

// Thermometer at 7 Am $6^{\circ}+$ Yet the fire going out Sophia's plants are frozen Dr Bartlett's was $4^{\circ}{ }^{-1}$ again

When it is proposed to me to go abroad -rub off some rust-\& better my-condition in a worldly sense-I fear lest my life will lose some of its homeliness. If these fields \& streams \& woodsthe phenomena of nature here--\& the simple occupations of the inhabitants should cease to interest \& inspire meno culture or wealth would atone for the loss. I fear the dissipation that travelling -going into society even the best-the enjoyment of intellectual luxuries-imply. If Paris is much in your mind-if it is more \& more to you-Concord is less $\&^{2}$ less $\&$ yet it would be a wretched bargain to accept the proudest Paris ${ }^{3}$ in exchange for my native village. At best Paris could only be a \{shool\} in which to learn to live here-a stepping stone to Concord-a school in which to fit for this University. I wish so to live ever as to derive my satisfactions \& inspirations from the commonest events-everyday phenomena-so that what my senses hourly perceive-my daily walk-the conversation of my
neighbors may inspire me-\& I may dream of no heaven but that which lies about me. A man may acquire a taste for wine or brandy- $\&^{1}$ so
lose his love for water-but should we not pity him?
The sight of a marsh hawk in Concord meadows is worth more to me than the entry of the allies into Paris. In this sense-I am not ambitious. I do not wish my native soil to become exhausted \& run out through neglect-

Only ${ }^{2}$ that travelling is good which reveals to me the value of home \& enables me to enjoy it better. That man is the richest, whose pleasures are the cheapest.
It is strange that ${ }^{3}$ men are in such haste to get fame as teachers-rather than knowledge as learners.

I hear that Goodwin found one of his this morning
traps frozen in ^ where it has not frozen before this year.
P. m. 3 1/2 Therm. $24^{\circ}+$

Cut a hole in thice in the middle of
Walden. It is just 24 1/4 inches //
thick-11 $1 / 2+$ being snow ice $123 / 4$ water ice \& there is between 3 \& 4 inches of crusted snow above this. The water rises to

[^57]within $21 / 2$ inches of the top of the ice-i.e. between a $9^{\text {th }} \& 10^{\text {th }}$ of the whole thickness. The clear ice has therefore gained $23 / 4$ inches beneath since the 16 of Feb. It has gone on freezing under $211 / 2$ inches of ice- Yet people very commonly say that it will not continue to freeze under half that thickness of snow \& ice. It is a job to cut a hole now-
Snow and ice together make a curtain 28 inches thick now drawn over the pond. ${ }^{1}$ Such is the prospect of the fishes? ${ }^{2}$

Mar $12^{\text {th }}$
The last 4 cold days have closed
// the river again against Merricks3-\& few small
prob-all the ^ other ^ places which may have opened-in the town-at the mouth of one or 2 brooks.

I hear from 2 sources of portions of brooks \&c
being frozen over within 2 or 3 days which had not frozen before this winter.

We had a colder day in the winter
of 54 \& 5 -than in the last-yet the ice did not get to be so thick- It is long continued steady cold which produces thick ice- If the present

[^58]cold should continue uninterrupted a thousand years would not the pond become solid?
Rufus Hosmer says he has known ${ }^{1}$ the ground here to be frozen 4 feet deep

I never saw such solid mountains
of snow in the roads- You travel along excellent
for many rods ${ }^{2}$ over ^ dry solid sleighing where the road is perfectly level not thinking but you are within a foot of the ground-then suddenly descend 4 or 5 feet-and find to your surprise that you had been traversing the broad back of a drift.

The crow has been a common bird in our street \& about our house the past winter-

One large limb of the great elm at Davis-sawed off presented this outline $\mathscr{C}$ a perfect harpMar $13^{\text {th }}$
Pm to Flints Pond
Much warmer at last- On Flint's
Pond-I cut a hole \& measured the ice at 22 rods from the shore nearest to Walden-where the water was 9 feet deep-(3measuring from its surface in the hole) The ice was 26 inches thick

[^59]$131 / 2$ of it being snow ice-\& the
ice rose above the water 2 inches-
This ice is as solid as at any time
in the winter-3 inches of Snow
above- It was so much work
to cut this hole with a dull
axe-that I did not try any other
place where it may have been thicker.
Perhaps it was thicker in the middle
Prob. not. judging from Walden-V $19^{\text {th }}$ proximo.
as in ' 47 .
Friday Mar $14^{\text {th }} 56$
quite warm. Therm. $46^{\circ}+$
$3^{\mathrm{d}} \mathrm{Pm}$ up Assabet-
The ice formed the forefront of this week-
-as that at merricks noticed on the $12-$ and heard of elsewhere in the mill-brook-appears to have been chiefly snow ice-though no snow fell- It was ap. blown into the water during those extremely cold nights \& assisted its freezing. So that it is a question whether the river would have closed again at Merrick's on the night of the 10 \& $11^{\text {th }}$ ult-notwithstanding the intense cold-if the snow had not been blown into it-a question, I say, because the snow was blown into it.

I think it remarkable that cold as
it was-I should not have supposed from my sensations that it was nearly so cold as the thermometer indicated.
// Tapped several White maples with my knife-but find no sap flowing.
but just above Pinxter ${ }^{1}$ Swamp ${ }^{2}$-one red maple-limb was moistened by sap trickling // along the bark-Tapping this I was surprised to find it flow freely. Where the sap had dried on the bark-shining and sticky it tasted quite sweet- Yet Anthony ${ }^{3}$ Wright tells me that he attempted to trim some apple trees on the $11^{\text {th }}$ ult-but was obliged to give up it was so cold- They were frozen solid. This is the only one of 8 or 10 White $\&$ red maples-that flows- I do not see why it should be..

As I return by the old Merrick bath Placeon the river-for I still travel every where on the middle of the river-the ${ }^{4}$ setting sun falls on the osier row toward the roadand attracts my attention. They certainly look brighter now \& from this point, than I have noticed them before this year-greenish \& yellowish below \& reddish above-\& I fancy the sap fast flowing in their pores- Yet I think that on a close inspection I should find no change. Never the less, it is on the whole perhaps the most V 2 ps forward
springlike sight I have seen. Mar $15^{\text {th }}$
Put a spout in the red-maple of yesterday \& hung a pail beneath to catch the sapMr Chase (of the Town School) who has lived a hundred

[^60]miles dist. in N.H. speaks of the snow fleas as a spring phenomenon-(prob. because the winter is more uniformly cold ${ }^{1}$ there)-\& says that they think it time to stop making maple sugar when they observe them. They get into the by myriads
sap ^ \& trouble them much.
Mar 16th
7 Am . The sap of that red maple has not begun to flow yet- The few spoonfuls in the pail \& in the hole are frozen.

These few rather warmer days have made a rough snowy
a little impression on the river- $\mathrm{It}^{2}$ shows ${ }^{\wedge}$ ice in many places-suggesting 3 that there is a river 2
beneath-the snow having probably-blown 3
\& melted off there-or the water oozed up-
(Put the last cause first)
A rough softening snowy ice-with some
darker spots where you suspect weakness-
though it is still thick enough-
2 Pm The red maple is now
about 1 inch deep in a quart pail-nearly ${ }^{4}$ all caught since morningIt now flows at the rate of about 6 drops in a minute- Has probably
flown faster this forenoon- It is
perfectly clear like-water- Going
throwing the pail over my head to save myself
home slipped on the ice $\wedge \&$ spilt
all but a pint. So it was lost on
the ice of the river- When the river breaks
up it will go down the Concord into
the Merrimack-\& down the Merri-

[^61]mack into the sea-\& there get salted as well as diluted-part being boiled into sugar. It suggests, at any ratewhat various liquors, beside those containing salt, find their way to the sea-the sap of how many kinds of trees?

There is at any rate such a phenomenon as the willows shining in the spring sun-however it is to be accounted ${ }^{1}$ for.

Mar. $17^{\text {th }}$ Monday
Snow going off very gradually under the sun alone- Going begins to be bad-horses see where the slump-\{hard\} turning out. cattle which have stepped a few inches
one side the sled track have $\{$ slumed $\} 2$ feet or more leaving great holes.
Mar 18
P. m. Up River-

It is still quite tight up Hub's Bath-
Bend-and at Clam Shell-though I
hesitate a little to cross at these placesThere are dark spots in the soft white ice-which will be soon worn through.

What a solid winter we have had--no thaw of any consequence-no bare ground since Dec $25^{\text {th }}$-but an unmelting mass of Snow \& ice-hostile to all greenness. have not seen a green radical leaf even-as usual. all being covered up

Nut Meadow Brook is open for a
dozen rods from its mouth-\& for a rod into the river- Higher up it is still concealed by a snowy bridge. 2 feet thick
// ^ I see the ripples made by some fishes, which were in the small opening at its mouth-making haste to hide them selves ${ }^{1}$ in the ice covered river. This square rod \& one or 2 others like it in the town, are the only places where

Thus early they appear ready to be the prey of the fishhawk
I could see this phenomenon now ${ }^{\wedge}-$ Within
// the brook I see quite a school of
or over
little minnows an inch long amid $\wedge$ the bare dead stems of Polygonums-and one
// or little water-bugs. (apple-seeds).
The last also in the broad ditch on the Corner-road in Wheelers Meadow\{.\}
Notwithstanding the backwardness of the season
all the town still under deep snow \& icehere they are in the first open $\&$ smooth water-governed by the altitude of the sun.
// -I see many small furrows freshly made in the sand at the bottom of the brook-from $1 / 2$ an inch to $3 / 4$ widewhich I suspect are made by some small shell-fish-already moving. Perhaps Paludina V. $20^{\text {th }}$ prox.

Mar. 19 ${ }^{\text {th }}$
Pm. To Walden-2
Measured the snow again

| // W of RR | E of RR | av | Trillium Woods |
| :---: | ---: | :--- | :---: |
| 15 | $114 / 5$ | $132 / 5$ | $16^{3} 3 / 4$ |

The last measurement was on the $7^{\text {th }}$

[^62]ult. when it av. about $16^{1}$ inches in
the open land- This depth it must have
preserved owing to the remarkably cold weather
till the $13^{\text {th }}$ at least. So $^{2}$ it chances
that the snow was constantly 16 inches at least
deep ^ on a level in open land from Jan 13
to Mar. $13^{\text {th }}$
It is remarkable how rapidly it has
E
settled on the W. of the RR as compared
with the W, since the $7^{\text {th }}$ ult (or I may say
rather the $13^{\text {th }}$ ) The whole av. settling, in open
land, since say the $13^{\text {th }}$ is a little less than 3
inches.
The thickness of the ice on Walden in the long cove on the S . side about 5 rods
from shore-where the water is $191 / 2$ feet
deep is just 26 inches. about 1 foot
being snow ice. In the middle it
was $241 / 4$ on the $11^{\text {th }}$ ult- It is the
same there now-and undoubtedly-it //
Prob. got to be thickest on this side
was then 26 in the long cove. ${ }^{\wedge}$ Since the
warmer weather which began on the
$13^{\text {th }}$ the snow which was 3 or 4 inches deep
is about half melted on the ice under
the influence of the sun alone-\& the
within the last 5 days //
ice is considerably softened ${ }^{\wedge}$-thus suddenly $\wedge$
quite through it, being easier to cut
\& more-moist-quite fine ${ }^{3}$ \& white like sticking together as damp snow when I shovel it out
The dust not at all hard dry \& crystalline
snow in the hole hole.
on myaxe.
Ap. then Walden is as thickly frozen about shore as Flint's.

While I am measuring, though it is quite warm,--the air is filled with large moist snow flakes-of the star form-which are rapidly concealing ${ }^{1}$ the very few bare spots on the R. R. embankment. It is indeed a new snow storm

Another old red maple bleeds ${ }^{2}$ now on the warm S edge of Trillium Wood. The $1^{\text {st }}$ maple was old \& in a warm position.

What befel ${ }^{3}$ at Mrs. Brooks'
On the morning of the
$17^{\text {th }}$ ult-Mrs Brooks Irish girl
Joan, fell down the cellar stairs
by her mistress
\& was found ^ ap. lifeless lying at the bottom- Mrs Brooks ran to the street door for aid to get her up-\& asked a Miss Farmer who was passing near by to call the blacksmith ${ }^{\wedge}$ - The ${ }^{4}$ latter lady turned instantly and making haste across the road on this errand fell flat in a puddle of melted snow-\& came back to Mrs Brook's bruised \& dripping \& asking for opodeldoc. Mrs Brooks again ran to the door \& called to Geo. Bigelow to complete the unfinished errand- He ran nimbly about

[^63]it \& fell flat in another puddle near the former-but his joints being limber-got along without opodeldoc \& raised the blacksmith ${ }^{1-}$ He also notified James Burke who was passing-\& he rushing in to render aid-fell off one side of the in the dark
cellar stairs-^ They no sooner got the girl upstairs then she came to \& went raving- Then had a fit.

Haste makes waste- It never
rains but it pours- I have this from
those who have heard Mrs Brooks' story-seen the girl-\& the stairs-\& the puddles.

No sooner is some opening made in the river-a square rod in area-where some brook or rill empties in than the ap. begin to
fishes ^ seek it for light \& warmth-and thus early perchance may become the prey of the fish hawk- They are seen to ripple the water darting out as you approach.

I noticed on the $18^{\text {th }}$ ult. that springy spot on the shore just above the RR bridge by the ash-which for a month has been bare for 2 or 3 feet now enlarged to 8 or 10 feet in diameter- And in a few other places on the meadowy shore-(e.g just above mouth of Nut meadow) I see great dimples
in the deep snow ${ }^{\wedge}$ betraying great springs
There the pads (Nuphar) \& cress already spring \& shells are left by the rat
$A t^{1}$ the broad ditch on the corner road
opposite Bare Garden-the snowy crust
had slumped or fallen in here \& there \& where the bridge was perfect I saw it smooth
quite 2 feet thick- In the still open water
there-small water-bugs were gyrating.
singly-not enough to play the game.
I am surprised at the sudden change
in the Walden ${ }^{2}$ ice within 5 days- In cut-
ting a hole now-instead of hard dry trans-
parent chips of ice-you make a fine
white snow very damp \& adhering together
with but few chips in it. The ice has been
affected throughout its 26 inches-
though most I should say above- Hard to say
exactly where the ice begins under the 2 inches of snow.

$$
\text { Mar } 20^{\text {th }} 56
$$

// It snowed 3 or 4 inches of damp snow to
last Pm \& night-now thickly adhering the twigs \& branches- Prob. it will soon melt \& help carry off the snow. Pm. to Trill. Wood \& to Nut mead. to tap a maple-see paludina \& get elder \& sumach spouts
Brook. Slumping in the deep snow-
It is now so softened that I slump at every
$3^{\mathrm{d}}$ step. The sap of red maples in low \&
// warm position now generally flows-but not in high \& exposed ones.

Where I saw those furrows in the sand in Nut meadow Brook the other day-I now explore-\& find within

[^64]2 squ foot or 2 a square foot or 2-half a dozen
of Paludina decisa with their feet out
within an inch of the surface-so I have
scarcely a doubt that they made them.
I suppose that they do not furrow the bottom
thus under the ice-but as soon as the spring sun has thawed it, they come to the surface, perhaps at night only,-where there is some little sand \& furrow it may be it is the love season
thus by their motions $\wedge^{1}$ Perhaps then make part of the food of the crows which visit this brook-\& whose tracks I now see on the edge-\& have all winter. Prob. they also pick up some dead frogs. Feather read in a paper to-day of of 740 \& odd apple ${ }^{2}$ tree buds recently taken out of the crop of a partridge.
Last nights snow-which is melting very fast is evidently helping to rot the ice very fast-in the absence of rain by settling into it-as did the older snow May be it will thaw the ground in the same way \& thick indeed. ^ Considering how solid ^ the river was a week ago I am surprised to find how cautious I have grown about crossing it in many places now.

For two or three days I have heard //
the gobbling of turkies the first spring
chicadees \&
sound-after the ${ }^{\wedge}$ hens-that I think of
The river has just begun to open at has been
Hub's Bend- It ^ closed there since Jan.
$7^{\text {th }}-$ i.e. 10 weeks \& a half

Set a pail-before coming here-to catch red-maple sap at Trill. Wood- I am now looking after elder \& sumach for spouts. I find the latter best-for though the former has as large a pith-(larger in prop.
commonly
to its size) its wood $\wedge$ being less it does not
Yet there is some by A. Barrett's ditch $2+$ inches in diameter-but its very
fill so large a hole-nor is it so strong. ^
strong-but its pith small. smooth
The pith \&c of the ${ }^{\wedge}$ smells to me like weak
tobacco. What other shrubs have a large
Only those plants which have a great growth
pith? the first year can have much pith-since ap. this does not increase afterward. V. Ap $22^{\text {nd }}$ for $\underline{\underline{t t}}$ sumach
Got my smooth sumach on the S side
of Nawshawtuct- I know of no shrubs here
abouts ${ }^{1}$-except alders ${ }^{2}$ \& the sumachs which
have a suitable pith \& wood for such a
smooth
purpose- The pith of the ${ }^{\wedge}$ sumach is a
light brown like yellow snuff-the ring of old wood next to it is a decayed looking greenish yellow-the sap wood is white.
When cut or broken it has a singularly there being often but a small proportion of sap wood
particolored \& decayed look-^ A white
sticky juice oozes out of the edge of the bark where cut-\& soon turns yellow
$\&\{a p\}$ hard. in drops like pitch or hickory sap.
enly harder. This pith does not come quite
out ^ so entire \& smoothly as elder-
being drier now, at least
you can shove it past the axils of
The old wood of the ivy is also yellow like this-but there
twigs. is more \& harder sap wood-\& the pith is quite small.
The pith of the poison sumach or dogwood is considerably smaller.-but I think it has $x^{3}$ the same scent with the smooth-
Mar 21 ${ }^{\text {st }}$
Geo Brooks of the North Quarter-
tells me that he went a fishing
at Nagog Pond on the $18^{\text {th }}$ ult.
$x$ Another poison dog wood has a very large pith, \& I am not sure about the
scent. The juice of the bark is not white. 4

[^65]and found the ice from 30 to 37 inches
thick-(the greater part or all but about
a foot snow ice)-the snow having blown
on to the ice there. He measured it with
a rule \& a hooked stick-(But at
Walden where I measured there was no drift=
It may have been no thicker at Nagog on an average
ing of the snow ${ }^{1}$.-) ^ He says that
both the grey squirrel \& the red eat pine-seed
former
but not in company. The ${ }^{2} \wedge$ have been quite common about his house the past winter-\& his neighbor caught two in his yard.

10 Am to my red maple sugar
camp- Found that after a pint \&
a half had run from a single tube after
3 Pm yesterday-it had frozen about $1 / 2$ inch
thick-\& this morning $1 / 4$ of a pint more had
run- Between $101 / 2$ \& 11 1/2 Am this fore-
noon-I caught $23 / 4$ pints more from 6
tubes at the same tree-though it
is completely overcast \& threatening rain$41 / 2$ pints in all
This sap is an agreeable drink like
(by chance) but slight
ice ${ }^{3}$ water ${ }^{\wedge}$ with a pleasant ${ }^{\wedge}$ sweetish taste.
I boiled it down in the P.m. \& it
made $11 / 2$ ounces of sugar without
any molasses.-which appears to be
the average amount yielded by the sugar maple in similar situations-viz south edge
of a wood.-a tree partly decayed 2 feet diameter.

[^66]It is worth the while to know that there is all this sugar in our woods much of
${ }^{\wedge}$ which might be obtained by beiling using the refuse wood lying about-without damage to the proposition ${ }^{1}$ who use neither the sugar nor the wood. I left home at 10 \& got back before 12 with $23 / 4$ pints of sap in addition to the $13 / 4$ I found collected. I put in saleratus \& a little milk while boiling-the former to neutralize the acid\& the latter to collect the impurities in a skum.
After boiling it till I burned it a little \& my small quantity would not flow when cool but was as hard as half done candy-I put it on again \& in a minute it was softened \& turned to sugar. While collecting sap the little of yesterdays lodging snow that was left dropping from the high pines in Trill. Wood-\& striking the brittle twigs in its descent-makes me think that the squirrels are running there.

I noticed that my fingers were purpled
evidently from the sap on my auger.
Had a dispute with father about the use of my $\{-\}$ making this sugar when I knew it could be done-\& might have bought sugar ${ }^{2}$ cheaper at Holden's. He said it

I made it my study
took me from my studies. I said ${ }^{\wedge}$ I felt as if I had been to a university.

It dropped ${ }^{\text {f }}$ from each tube about as
fast as my pulse beat-\& as there were
3 tubes directed to each vessel-it flowed

[^67]at the rate of about 180 drops in a minute into it.
One maple standing immediately north of a thick white-pine scarcely flowed at all-while a smaller farther in the wood-ran pretty well.

The $S$ side of a tree bleeds first in the springI hung my pails on the tubes or a nail-had 2 tin pails \& a pitcher. Had a $3 / 4$ inch auger. Made a dozen spouts 5 or 6 inches longhole as large as a pencil-smoothed with a pencil.

Sat. Mar. ${22^{\text {nd }} 56} 5$
Pm. to White Maples \& up Assabet.
The ice of the river is very rapidly softening
-still concealed by snow-the upper part becoming homogeneous with the melting snow above it. I sometimes slump into snow \& ice 6 or 8 inches to the harder ice beneath.

I walk up the middle of the Assabet
\& most of the way on mid. of $S$ branchin snow
Many tracks of crows ^ along the edge of the open water against Merricks at Island- They thus visit the edge of water-(this \& brooks-) before any ground is exposed. Is it for small shell fish? The snow now no longer bears you It has become very coarse grained under the sun-\& I hear it sink ${ }^{1}$ around me as I walk.

Part of the white maples now begin
some perhaps 2 or 3 days
to flow ${ }^{\wedge}-$ prob. in equally warm positions they would have begun to flow as early as those red ones which I have tapped. ap.
// Their buds-and ${ }^{\wedge}$ some of the red ones-are
This prob. follows directly on the flowing of the sap
visibly swolen. ^ In 3 instances I cut off a twig \& sap flowed \& dripped from the part attached to the tree, but in no case would any sap flow from the part cut off-(I mean where I first had cut it) which appears to show Yet the next day at Walden it flowed from
that the sap is now running up. I
both parts-though considerably more from the end attached to the tree. also cut a notch in a branch 2 inches
It will also drip from the upper carf of a woodchopperin diameter, \& the upper side of the cut remained dry-while sap flowed from the lower side-but in another instance both sides were wet at once \& equally.
// The sap then is now generally flowing upward in red \& white maples in warm

See it flowing from maple twigs which were gnawed
positions $\{-\}$ off by rabbits in the winter-
The down of willow ${ }^{1}$ catkins in very warm
// places has in almost every case peeped out
1/8 of an inch-generally over the whole willow
On water standing above the ice under
// a white maple are many of these Perla (?) insects with 4 wings drowned-though it is all ice \& snow around the country

Do not see any flying-nor before this.
over.
The wood choppers-who are cutting
the wood at Assabet spring-now at last
go to their work up the middle of the
but one got in yesterday one leg the whole length. river. ${ }^{\wedge}$ At the red maple which

It is rotted through in many places behind Pritchard's.

[^68]I first tapped I see the sap still running \& wetting the whole side of the tree. It has also oozed out from the twigs-especially those that are a little drooping \& run down a foot or two bathing them some times all around-both twigs \& buds some-times-or collected in little drops on the under sides of the twigs-\& all evaporated to molasses-which is for the most or ink
part as black as blacking ^ having probably caught the dust \&c even over all this snow- Yet it is as sweet \& thick as molasses-\& the twigs \& buds look as if blacked \& polished. Black drops of thick
this ^ congealed sweet syrup spot the under sides of the twigs- No doubt the bees \& other insects frequent the maples nowI thought I heard the hum of a bee but perhaps it was a R. R. whistle. // on the Lowell RR See a fuzzy gnat on it. ${ }^{\wedge}$ It is as thick as molasses- It is especially apt to collect about ${ }^{1}$ the bases of the is delayed twigs where the stream stops- Where the sap is flowing-the red maple being cut inner
the ^ bark turns crimson. I see many snow fleas on the moist maple chips. Saw a pigeon woodpecker under // the swamp wht oak in Merricks Pasturewhere ther is a small patch of bare ground. Prob. Minot saw one in his door yard in

[^69]mid winter.
$$
\text { Mar. } 23^{\text {d ' } 56}
$$

I spend a considerable portion of my time observing the habits of the wild animals my brute neighbors- By their various movements \& migrations they fetch the year about to me- Very significant are the flight of geese \& the migration of suckers \&c \&c- But when I consider that the nobler animals have been exterminated here-the cougar-panther-lynx-wolverine wolf-bear the beaver, the turkey moose-deer ^ \&c \&c-I cannot but feel as if I lived in a tamed \&, as it were, emasculated country- Would not the motions of those larger \& wilder animals have been more significant still- Is it not a maimed \& imperfect nature that I am conversant with? ${ }^{1}$ As if I were to study a tribe of Indians that had lost all its warriors. Do not the forest \& the meadow now lack ex-pression-2now that I never see nor think of the moose with a lesser forest on his head-in the one-nor of the beaver in the other? When I think what were the various sounds \& notes-the migrations \& works \& changes of fur \& plumage which ushered in the spring \& marked the other seasons of the year-I am reminded that this my life in Nature -this particular round of natural phe-
nomena which I call a year-is lamentably
incomplete- I listen to concert-in which so many
parts are wanting. The whole civilized country
is to some extent turned into a city. Many
\& I am that citizen, whom I pity.
^ of those animal migrations \& other phenome-
na by which the Indians marked the
season-are no longer to be observed.
I seek acquaintance with nature-to know
her moods \& manners- Primitive Nature ${ }^{1}$ is
the most interesting to me. I take infinite pains to know all the phenomena of the spring, for instance-thinking that I have here the entire poem-\& then to my chagrin I learn that it is but an imperfect copy that I possess \& have read-that my ancestors have torn out many of the first leaves \& grandest passa-ges-\& mutilated it in many places.

I should not like to think that some demigod had come before me \& picked out some of the best of the stars. I wish to know an entire heaven \& an entire earth.
All the great trees-\& beasts-fishes \& fowl are gone-the streams perchance are somewhat shrunk.

I see that a shop keeper adver-
tises among his perfumes for handkerchiefs
"meadow flowers"-\& "New mown hay". Pm to Walden
The sug. maple sap flows-\& for aught I //
know is as early as the red.

I think I may say that the snow
// has been not less than a foot deep on
a level in open land-until today-since
about 11 weeks Jan $6^{\text {th }} .\left\{{ }^{\text {th }}\right\} \wedge$ It prob- begins to be less about this date. The bare ground begins to appear where the snow is worn in the street- It has been steadily melting since Mar. $13^{\text {th }}$ the therm. rising daily to 40 \& 45 at noon-but no rain.

The E. side of the Deep Cut is nearly bareas is the RR itself-and on the driest parts of the sandy slope I go looking for Cicindela-to see it run or fly amid the sere blackberry vines-some life which the warmth of the dry sand under the spring sun has called forth- But I see none. I am reassured \& reminded that I am the heir of eternal inheritanceswhich are inalienable-when I feel the warmth reflected from this sunny bank\& see the yellow sand \& the reddish sub-soil-
\& the trickling of melting snow in some sluiceway \& hear some dried leaves rustle $\wedge$. The eternity which I detect in Nature ${ }^{1}$ I predicate of myself also. How many springs I have had this same experience! I am encouraged for I recognize this steady persistency \& recovery of nature as a quality of myself.

The first places which I observe to be bare now-though the snow is generally so deep still-are the steep hill sides facing the South-as the side of the cut (though it looks not south exactly-) \& the slope of Heywoods Peak toward the pond.
there is less snow there-on ac. of eddy-\& ap. the tree absorbs heat
Also under some trees in a meadow ${ }^{\wedge}-$ or a ridge in the same place-Almost the whole of the steep hill side on the $\mathrm{S} \mathbf{N}$ of Walden is now bare \& dry \& warm-though fenced in with ice \& snow- It has attracted partridges 4 of which whirr away on my approachThere the early sedge is exposed-(\& looking closer I observe that it has been sheared off ${ }^{1}$ close down when green far $\&$ wide $-\&$ the fallen by their sides withered top are little handfuls of hay ${ }^{\wedge}$ which have been covered by the snow-\& sometimes look as if they had sered as nests for the mice-for

Yet not such plain nests as in the grain field last spring Prob. the Mus. leucopus.
their green droppings are left in them abundantly. $\wedge$ and the winter-green
${ }^{\wedge}$ and the sere penny royal still retains some fragrance-

As I was returning on the RR -at the crossing hearing a rustling I
beyond the shanty-^ saw a striped squirrel //
E
amid the sedge on the bare ${ }^{\wedge}$ bank-ap 20 feet
distant-After observing me a few moments
between the rails
as I stood perfectly still-^ he ran straight up to within 3 feet of me out of curiosity-then after a moments pause \& looking up to my face-turned back-\& finalled crossed the RR-All the red was on $\{-\}$ his rump \& hind quarters. When running he carried his tail erect-as he scratched up the snowy bank.

Now then the steep south hill sides
begin to be bare-exposing \& the early sedge \& sere but still fragrant penny royal
\& rustling leaves, are exposed-\& you
sheared off
see where the mice have ${ }^{\wedge}$ gnawed the sedge during the winter
\& also made nests of its top-^ There too the partridges resort-\& perhaps you hear the bark of a striped squirrel \& see him scratch up toward his hole rustling the leaves- $\{$ For $\}$ all the inhabitants of nature are attracted by this bare \& dry spot as well as you. The musk rat houses ${ }^{1}$ were certainly very few \& small last summer-and the river has been remarkably low up to this time-While the previous fall there very numerous \& large-\& in the succeding winter the river rose remarkably high. So much for muskrat sign.
// The bare ground just begins to appear in a few spots in the road in mid. of the town.
Monday ${ }^{2}$ Mar. $24^{\text {th }} 56-$
// Very pleasant day- Therm. $48^{\circ}+$ at noon
$9 \mathrm{Am}-$ start to ${ }^{3}$ Get $\underline{2}$ quarts of White Maple
\& home at $111 / 2$
// sap ${ }^{\wedge}$-one ${ }^{4}$ F. Hiemalis in yard. Spend the forenoon on the river at the White Maples-
warble
// // I hear a blue-birds ^ \& a song sparrow's
Blue birds seen in all parts of the town to day for $1^{\text {st }}$ time as I hear-chirp- So much partly for being out

The F Hiemalis has been seen 2 or 3 days. the whole forenoon--Cross the river behind Monroe's- Go every where on it is all solid
the N. branch $\wedge-\&$ almost every where on the $S$. branch- The crust bears in the morning- The snow is so coarse grained \& hard that you can hardly get up a handful to wash your hands with except the dirty surface. The early
// aspen-bud ${ }^{5}$ down very conspicuous $1 / 2$ inch long-yet I detect no flow of sap. The White maple sap-does not flow

[^70]fast generally at first=or 9 Am-not till
about 10. Yet last year I paddled my boat
to F. H. Pond on the $19^{\text {th }}$ of March-!
Before noon I slump 2 feet in the snowYou bore a little ${ }^{1}$ whole with your knife \& presently the wounded sap wood begins to glisten with moisture-\& anon a clear crystalline tear-like drop flows out \& fall run's down
or drops at once to the snow-
the bark-^ This is the sap of which the far
That's the sweet liquor which the Ind. boiled a thousand years ago.
famed maple-sugar is made-
Cut a piece of Rhus Toxicodendron resting on
at rock-at Egg Rock-5/8 of an inch in diam-eter-which had 19 rings of annual growth.
It is quite hard \& stiff.
My sugar making was spoiled by putting
in much soda instead of saleratus-by ${ }^{2}$ accident.
I suspect it would have made more sugar
black
than the red-did. It proved only brittle ^ candy
This sap flowed just about as fast as that
of the red maple-
It is said that a great deal of sap will
run from the yellow-birch.
\{B\} The River begins to open generally at the bends-for 10 or 20 rods \& I see the dark ice alternating with dark water there while the rest of the river is still covered with snow-

Mar 25 ${ }^{\text {th }}$

P. m. to Walden. The willow \& aspen catkins have pushed out considerably
since the $1^{\text {st }}$ of Feb in warm places-
I have frequently seen the sap of maples flow
in warm days in the winter-in warm lo-
calities- This was in twigs- Would ${ }^{1}$ it in the
trunks of large trees? - \& if not, is not this
an evidence that this sap did not come
up from the roots?
The meadow E. of the RR causeway is bare in many spots-while that on the W. is completely \& deeply covered-
Yet a few weeks ago it was deepest on the east-I think of no reason for this-except that the causeway may keep off the cold N. W. winds from the former meadow-for 30 rods $^{2}$ distant there are no bare spots. Why is the eastern slope-now, as every spring (almost completely) bare-long before the western? The road runs N \& S \& the sun lies one the one side as long as on the other Is it more favorable that the frozen snow be acted on by the warmed air before the sun reaches it-than after it has left it? Another \& ${ }^{\text {nd }}$
${ }^{\wedge}$ reason is prob. that there is less snow on that side-or on the W slope of a hill than on the Eastern- Snow drifting from the N. W. lodges under the West bank. So I observe today-that
( \& this seems to give weight to the $2^{\text {d }}$ reason urged above)
the hills rising from the $\mathrm{N} \& \underline{\text { west }}{ }^{\wedge}$ sides
of Walden are partially bare-While those
on the south and east are deeply \& com-
pletely covered with snow.
his house
Mr. Bull tells me that his grapes grow faster \& riper sooner on the W than the E side of ${ }^{\wedge}$

There have been few if any small migratory have
birds the past winter. I did not seen ${ }^{1}$ a tree-sparrow-nuthatch-creeper-nor more than one red-poll since christmass- They probably went further south.

I now slump from 2 to four inches into Waldenthough ${ }^{2}$ there has been no rain since I can remember- I cannot cut through on ac- of the water in the softened ice flowing into the hole. At last in a drier place I was not troubled with water-till I had cut about a foot on through the snow ice-when 2 or 3 streams of water $1 / 2$ inch or more in diameter spurted up through partly honey-comed
holes in the disorganized ${ }^{\wedge}$ clear ice- So
Prob. the clear ice is thus riddled all over the pond-for this was a drier place than usual.
I failed to get through-^ The whole mass
Is it the effect of the melted snow \& surface working down?-or partly of water
in the middle is about 24 inches thick
pressing up?
but I scrape away about 2 inches of the surface with my foot-leaving 22 inches. //
For About a rod from the shore-on the N
\& W sides-(I did not examine the others)
it is comparatively firm \& dry-then for
2 rods you slump 4 inches or more-then
belt
\& generally only about 2 - Is that $\wedge$ the effect of reflection from the hills? ${ }^{3}$

Hear the hurried \& seemingly frightened
notes of a robin-\& see it flying over //
\& afterwards its tut tut at a distance
the $\{R\} R R$ lengthwise $\wedge-$ This \& the
birds of yesterday have come ${ }^{4}$ though the
ground generally is covered deep with
snow- They will not only stay with us through
a storm, but come when there are but
resting places for them. It must be hard
for them to get their living now.
water
// The tallest ^ andromedas now rise
6 or 8 inches above the snow in the
swamp.

$$
\text { Mar. } 26^{\text {th }} \text { '56 }
$$

to Cambridge-
I hear that Humphrey Buttrick found a whole
(He tells me that his dog found 4 in the winter \&-as other coveys are missing thinks they have starved) covey ^ of quails dead under the snow- At
Philadelphia a month or 2 since they offered
more than market price
a reward for live ones $\wedge^{-1 \text { th }}$ preserve them.
$\mathrm{We}^{2}$ have heard of an unusual quantity
of ice in the course of the Liverpool
packets this winter- Perhaps the Pacific
has been $\{$ sunk $\}$ by one, as we hear that
some other vessels have been- Yet the
papers say it has been warmer about
Lake Superior than in Kansas-\&
that the Lake will break up earlier than usual.
// They are just beginning to use snow wheels
in Concord ${ }^{3}$-but only in the middle of the town-where the snow is at length worn \& melted down to bare ground in the middle of the \{gre\} road from 2 to 10 feet wide-Sleighs are far the most common even here
// In Cambridge there is no sleighing
-for the most part the middle of bare \& even
the road from Porters to the College is dusty for 20 to 30 feet in width-the College Yard is one half bare- So if they have had more snow than \{\}\} we, as some say, it has melted much faster- There is also less in the towns between us \& Cam. than in Concord. The snow lies longer on the low level plain surrounded by hills-in which Concord is situated. I am struck by the more wintry aspect-almost entirely uninterrupted snow fields-on coming into Concord in the cars.

The Romans introduced husbandry into
England, where but little was practiced before\& the English have introduced it into Americaso we may well read the Roman ${ }^{1}$ Authors for a history of this art as practiced by us.

I am sometimes affected by the man
consideration that a ^ may spend the whole of his life after boyhood in m
acco ${ }^{\wedge}$ pplishing a particular design-as
if he were put to a petty \& special use -without taking time to look around him \& appreciate the phenomenon of his existence- If so many purposes are thus necessarily left unaccomplished -perhaps unthought of-we are reminded of the transient interest we have in this life- Our interest in our
in the spread of liberty \&c
country ${ }^{\wedge}$ strong \& as it were innate as it
is-cannot $\{-\mathrm{a}\}$ be as transient as our
present existence here. It cannot be that all those patriots who die in the midst of their career have no further connexion with the career of their country. Mar. $27^{\text {th }}$ ' 56
Uncle Charles died this morning about midnight-aged 76 The frost is now entirely out in some
// parts of the New Burying Ground-the sexton tells me-half way up the hill which slopes to the S . unless it is bare of snow-he says-

In our garden where it chances to be bare-2 or more rods from the house I was
// able to dig through the slight frost- In ${ }^{1}$ another place near by I could not.

The river is now open in reaches ice
// of 20 or 30 rods-where the ${ }^{2} \wedge$ has disappeared by melting. about 70
Elijah Wood Sen. ^ tells me he does not remember that the river was ever frozen so long-nor that so much snow laid on the ground so long.

People do not remember when there
// was so much old snow on the ground at this date.

Mar 28 ${ }^{\text {th }}$
Uncle Charles buried. He was born in Feb. 1780-the winter
// Cold \& the earth stiff again after
of the great Snow-\& he dies in the winter of another great snowa life bounded by great snows.
15 days of steady warm \& for the most part sunny days (without rain) in which
the snow \& ice have rapidly melted.
Sam. Barrett tells me that a boy caught a crow in his neighborhood the other day in a trap set for mink. Its leg was broken. He brought it home under its arm \& laid it down in a shop thinking to keep it there alive. It looked up sidewise ${ }^{1}$ from as it lay seemingly helpless on the floor-but the door being open-all at once to their surprise it lifted itself on its wings \& flitted out \& away without the least trouble. Many crows have been caught in mink traps the past winter, they have been compelled to the few openings in brooks \&c visit the water sides ^ so much for foodBarrett has sufferred all winter for want of water. I think to say to my friend-There is but one interval between us. You are on one side of it-I on the other- You know as much about it as I-how wide-how impassable it is. I will endeavor not to blame you- Do not blame me- There is nothing to be said about it. Recognize
pass over
the truth $-\& \wedge$ eross the intervals that are bridged.

Fare well my friends- My path inclines
to this side the mts-your's to that
For a long time you have appeared further \& further off to me.
I see that you will at length disappear
altogether- For a season my path
seems lonely without you- The meadows
are like barren ground- The memory of me is steadily passing away from you My path grows narrower \& steeper \& the night is approaching- Yet I have in the infinite future
faith that ^ new suns will rise \& new plains expand ${ }^{1}$ before me-and I trust that I shall therein encounter pilgrims who bear that sane virtue that I recognized in you. will be very who indeed are that ${ }^{\wedge}$ virtue that was you I accept the everlasting \& salutary law. which was promulgated as much that spring that I first knew you, as this that I seem to lose ${ }^{2}$ you.
former
My ^ friends, I visit you-as one walks
amid the columns of a ruined temple
You belong to an era-a civilization \& glory long past.
I recognize still your fair proportionswhich we
notwithstanding the convulsions ${ }^{\wedge}$ you ${ }^{3}$ have felt \& the weeds \& jackals that have sprung up around. I come here to be reminded of the past--to read your inscriptions-the hieroglyphics the sacred writings

We are no longer the representatives of our former selves.

Love is a thirst that is never slaked.
Under the coarsest rind the sweetest meat. If you would read a friend aright-you must be able to read through something thicker the \& opaquer than horn. If you can read a friend-all languages
\{Enemies publish themselves-They de-
will be easy to you. clare war- The friend here declares his love\}

[^71]Mar. 29 $^{\text {th }} 56$
Another cold day- Scarcely melts at all.
Water skimmed over in chamber-with fire March $30^{\text {th }} 56$
Pm to Walden \& Fair Haven.
Still cold \& blustering. I came out to see the sand \& rich soil in the deep cut, as I would to see a spring flower-some redness in the cheek of earth. These cold days have made the ice of Walden dry and pretty hard again at top. It is just 24 inches thick in // about 11 inch of snow ice the middle-^ It has lost but a trifle on the surface. The inside is quite moist- The clear ice very crystalline \& leaky-letting the water up from below so as to hinder my cutting. $\mathrm{It}^{1}$ seems to be more porous \& brittle than the snow ice.
I go to Fair Haven via the Andromeda SwampsThe snow is a foot \& more in depth there\{-\} still. There is a little bare ground in \& swampy
next to the ${ }^{\wedge}$ woods at the head of Well Meadow-where the springs \& little black rills are flowing. I see already one blade 3 or 4 inches long of that purple or // lake grass lying flat on some water-between the first leaf with a rich bloom on it snow-Clad banks-^ How silent are the footsteps of Spring! There too, where the is a fraction of the meadow 2 rods over-quite bare under the bankin this warm recess at the head of the
meadow-though the rest of the meadow is covered with snow a foot or more in depth-I am surprised to see the skunk-cabbage with its great
? spear heads open-\& ready to blossom (i.e. shedpollen in a day or $2^{-}$) and $a^{1}$ caltha palustris
bud which shows yellowish-\& the golden sax-
also there are many fresh tender leaves of ap the gold-thread $\stackrel{?}{\lambda}$ in open meadow there prob. not
ifrage-green \& abundant-^ all surrounded \& hemmed in by snow which covered the ground since Christmas-\& stretches as far as you can see on every side.
and there are as intense blue shadows on the snow as I ever saw.
The spring advances in spite of snow \& ice
\& cold even- The ground under the snow
has long since felt the influence of the spring sun-whose rays fall at a more favorable angle. The tufts or tussocks next the edge of the snow were crowned with dense phalanxes of stiff spears
of the stiff triangularish sedge grass
of any plant
// 5 inches high but quite/yellow
This is the greatest growth ^ I have seen-I had not suspected any
with a very slight greenness at the
I can just see a little greening on the bare \& dry south bank.
tip-showing that they pushed up
through the snow which melting
they had not yet acquired color.
\& clefts
In warm recesses ^ in meadows \& rocks in
the midst of ice \& snow-nay even
under the snow vegetation commences
\& steadily advances.
// I find Fair Haven Pond \& the river
lifted up a foot or more-the result
the long steady thaw in the sun- The water of the pond and river has run over the meadows
partly
eovering mixing with \& ^ covering the snow- On
somewhat
this making it ^ difficult to get onto the river on the E side- On the E. side of the pond the ice next the shore is still frozen to the bottom under water by one edge while main body of the the other slants upward to meet the ${ }^{\wedge}$ ice of the Pond- This sort of canal on one or both sides of the river is from o or a rod to 3 or 4 rods wide- This is the most decided step toward a breaking up as yetBut the pond \& the river are very solid yet I walk over the pond \& down on the mid//
dle of the river to the bridge-without seeing an opening.
Saw prob. a henhawk?- (saw the black \{tips\} to //
may have been a marsh hawk or harrier
wings-) sailing low over the low cliff
next the river-looking probably for birds.
The south hill sides no sooner begin
to be bare-\& the striped squirrels-\&
birds resort there-than the hawks come
from Southward to prey on them. I
think that even the henhawk is
here in winter, only as the robin is.
For 25 rods the corner road is im-
passable to horses \&c because of their slumping in the old snow-\& a new path has been dug-which a fence shuts off the old. Thus they have served the roads on all sides the town-1

Mar. $31^{\text {st }}{ }^{\prime} 56$
Pm to Peters via Winter \{Strt\}
I see the scarlet tops of white maples
nearly a mile off down the river-the
lusty shoots of last year- Those of the red
maple do not show thus.
I see many little holes in this old \& solid snow where leaves have sunk down gradually-\& perpendicularly 11 or 12 inches- The hole no larger at the top than at the bottom-nay often partly closed at top by the drifting-and exactly the form \& size of the leaf- It is as if the sun had driven this thin shield like a bullet thus deep into the solid
It is remarkable how deep the leaves settle into an old snow like this.
Vnp.b. 2
// snow- See a small ${ }^{1}$ ant running about over a piece of meadow turf.
// The celandine begins to be conspicuous springing under Brown's fence

$$
\text { April } 1^{\text {st }} 56
$$

P.m. Down RR-measuring snow \& to F. H.

Hill-

| // W. of RR |  |  | E of RRo | av.$5^{1 / 2-i n c h}$ | Trill. Wood. 22 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 5 | 12 |  |  |  |
| 0 | 5 | 17 | o |  | 11 |
| 3 | 3 | 11 | o |  | 11 |
| 5 | 3 | 11 | o |  | 7 |
| 4 | 9 | 15 | o |  | 8 |
| 4 | 7 | 15 | 10 |  | 12 |
| 4 | 11 |  | 8 |  | 11 |
| 5 | 13 | o) 344 (81/2 | o |  | 11 |
| 3 | 13 |  | o |  | 11 |
| 5 | 12 |  | o |  | 6 |
| 5 | 13 |  | o |  | 9 |
| 7 | 14 |  | o |  | 14 |
| 8 | 13 |  | o |  | 11 |
| 14 | 15 |  | o |  | 10 |
| 9 | 16 |  | o |  | 10 |
| 7 | 13 |  | o |  | 11 |
| 3 |  |  | o |  | 8 |
| 10 |  |  | o |  | 8 |
|  |  |  | 3 |  | 6 |
|  |  |  | 9 |  | 3 |
|  |  |  | 6 |  |  |

[^72]\[

$$
\begin{gathered}
0 \\
1 \\
20 \\
\overline{24)} 57\left(21 / 3^{1}\right.
\end{gathered}
$$
\]

It appears from the above how rapidly the snow has melted on the E side of the RR-causeway-though 8 to 12 rods from it-being sheltered by it from the N. W.
v ap. 11
wind. ^ It is for the most part bare ground there
Adhering to these localities the average
depth in open land is $51 / 2$ inches-but the
E side of RR -is a peculiarly sheltered place
and hence bare-while the earth generally is covered- It is prob. about 7 inches //
deep on a level generally in open land.
It has melted at about the same rate W. of RR-\& in Trill. Woods since the $19^{\text {th }}$. It is a question whether it
is better sleighing or wheeling now taking all our roads together. At any rate we may say the sleighing lasted till april. In some places it still fills the roads level with the walls\& bears me up still in the middle of the day. It grows more \& more solid -ap. freezing at night quite through W ㅍ Wheeler (of the Corner Road) tells me that it was more solid this morning than any time in the winter\& he was surprised to find that it would bear his oxen where 3 or 4 feet deep behind his house- On some roads you walk in a path
recently shovelled out with upright walls of snow 3 or 4 feet high on each side \& ${ }^{1}$ a foot of snow beneath for 20 or 30 rods
you ^$\wedge \&$ this is old snow. We have had none since Mar. 20-\& that was very moist \& soon melted. The drifts on the E side of the Depot-which have lain there a great part of the winter-still reach up to the top of the first pane of glass.
But generally speaking we slump so much -especially in the woods-except in the morning-\{that $\}$ the snow is so deep that we are confined to the roads // or the river still. Choppers can not \& teams cannot get in for work in the woods yet- wood yet

A new snow of this depth would soon go off; but this old snow is solid and It seems to be gradually turning to ice icy \& wastes very slowly. ^ I observe that while the snow has melted unevenly in waves \& ridges-there is a transparent icy glaze about $1 / 16$ of an inch thick but as full of holes as a riddle-spread level
like gauze ^ over all-resting on the prominent parts of the snow-leaving hollows beneath from 1 inch to 6 or more inches in depth-I often see the spiders running under neath this. This is the surface which has melted \& formed an icy crust-\& being transparent- it has transmitted the heat to the snow beneath-\& has out-
lasted that- This crashes \& rattles under your feet.

The bare places now-are the steep south
\& W. or S. W. sides of hills-\& cliffs-\& also next to woods \& houses on the same sides- / The ridges \& brows of hills-\& slighter ridges \& prominences in the fields- $/{ }^{1}$ Low open ground protected from the N. W. wind- / Under trees \&c.

I might have put the roads-2 ${ }^{\text {nd }}$.
Going by the path to the Springs-I find oak
great beds of ^ leaves-sometimes a foot thickvery dry \& crisp-\& filling the path on one side of it in the woods-for $1 / 4$ of a inviting one to lie down mile-^ They have absorbed the heat \& settled like the single ones seen yesterday ${ }^{\wedge}$ in mass a foot or more-making a path to that depth- Yet when they are unusually thick they preserve the snow beneath-\& are found to cover an almost icy mound.

$$
\text { Apr. } 2^{\text {nd }} 56
$$

8 Am. to Lee's Cliff-via. RR.
Andromeda Ponds-\& Well MeadowI go early while the crust is hard. I hear a few songsparrows tinkle on the alders
they skulk \& flit along below the level of the ground in the ice filled ditches by the $R \mathrm{R} \wedge-\&$ blue birds warble over the

A foot or more of snow in Andromeda
Deep-Cut. ponds.
In the warm recess at the head of Well-meadow-which makes up on the N. E side of F. Haven-I find many evidences of

Pushed up through the dead leaves-yet flattened by the snow \& ice which was just melted here behold
// spring. ^ \{\&\} The skunk cabbage has been
in bloom-i.e. has shed pollen some time here all that now sheds pollen ${ }^{\wedge}$ has been frost bitten and been ${ }^{1}$ now frost bitten \& decayed. ${ }^{\wedge}$ - Others are ready to shed it in a day or $2-\mathrm{I}$ find no other flower nearly so forward as thisThe Cowslip appears to be coming next to it- Its buds are quite yellowish \& half an inch, almost, in diameter- The alder scales do not even appear relaxed yetThis year at least-the cabbage is the It may possibly be a little
first flower-\& perhaps it is always ${ }^{2}$ earlier than I have thought; if you seek it in $V$. the $4^{\text {th }}$ inst.
a favorable place. The springy soil
in which it grows melts the snows
early-\& if beside it is under the south side of a hill in an open in a recess
oozy alder swamp ^-sheltered from
cold 3 winds like-this- It may commonly doubtful.
be4 the first flower ${ }^{\wedge}$ - It will take you half a life time to find out where to look for the earliest flowerI have hitherto found my earliest at V. $4^{\text {th }}$ prox.

Clam shell-a much more exposed place -5
Look for some narrow meadowy bay running north into a hill-\& protected by the hill on 3 sides the north $\&$ partly on the $\mathrm{E} \& \mathrm{~W}-$ At the head of this meadow, where many ${ }^{6}$ springs ooze out from under the hill \& saturate all the ground-

[^73]dissolving the snow early in the springor on the edge
in the midst ^ ${ }^{\text {of }}$ a narrow ${ }^{1}$ open alder swampthere look for the earliest skunk-cabbage-\& cowslip-Where some little black rills are seen to meander or heard to tinkle in the middle of the coldest winter- There appear the great spearheads of the skunk cabbage-yellow\& red-or uniform mahogany colorwith ample hoods sheltering their purple spadixes. The plaited buds of the hellebore are 4 or 5 inches high- There are buds // of fresh green moss in the midst of the shallow water- What is that coarse sedge like-grass-rather broadly triangularish-2 inches high in the waterThis and the cress have been eaten prob. by the rabbits whose droppings are abundant-I see where they have gnawed \& chipped off the willow osiers. Common grass is quite green.

Here where I come for the earliest flowers
I might also come for the earliest birdsThey seek the same warmth \& vegetation. \& so prob. with quadrupeds-rabbits skunks-mice \&c. I hear now as I stand over the first skun cabbage-the notes first
of the ${ }^{\wedge}$ red-wings-like the squeaking ${ }^{2}$ of //
or grackles?
a sign-^ over amid the maples yonder-

Robins are peeping \& flitting about
Am surprised to hear one sing regularly
their morning strain -7 or 8 rods off-
\& smothered
yet so low ${ }^{\wedge}$ with its ventriloquism that
you would say it was half a mile
off- It seems to be wooing its mate that sits within a foot of it.
There are many holes in the surface of the bare springy ground amid the rills-made by the skunks or mice-\& now their edges are bristling leaf feather like
with ^ frost-work-as if they were the breathing-holes or nostrils of the earth.

That grass which had grown 5 inches on the $30^{\text {th }}$ is ap. the cut grass of the meadows. The withered blades which are drooping about the tufts are 2 feet long. I break the solid snow bank with my feet-\& raise its edge-\& find the stiff but tender yellow blades or shoots beneath it. They seem not to have pierced it but are prostrate beneath it. They have actually grown beneath it-but not directly up into it to ${ }^{1}$ any extent rather flattened out beneath itCross F. H. P. to Lee's Cliff- The Crowfoot \& saxifrage seem remarkably backward-no growth as yetBut the Catnep has grown even ${ }^{2} 6$
inches-\& perfumes the hill-side when bruised-
The columbine with its purple leaves
has grown 5 inches ${ }^{1-\&}$ one is flower bud-
ded-ap. nearer to flower than any thing
there- Turritis stricta very forward 4 inches
high-
It is evident that it depends on the character of the season whether this flower or that is the most forward-

- Whether there is more or less snow-or cold or rain \&c. I am tempted to stretch myself on the bare ground above the cliff-to feel its warmth in my back\& smell the earth \& the dry leaves. -I see and hear flies \& bees aboutA large buff-edged butter-fly-flutters by // along the edge of the cliff-V. antiopa Though so little of the earth is baredthis frail creature has been warmed to life again. Here is the broken shell of one of those large white snailsHelix albolabris on the top of the CliffIt is like a horn with ample mouth wound on itself. I am rejoiced to find anything so pretty- I cannot but think it nobler, as it is rarer-to appreciate some beauty than ${ }^{2}$ it to feel much sympathy with misfortune. The Powers ${ }^{3}$ are kinder to me when they permit me to en-
joy this beauty-than if they were to express
any amount of compassion for me- I
could never excuse them that.
A woold ${ }^{1}$-chuck has been out under
the cliff-\& patted the sand-cleared out
the entrance to his burrow.
Muskrat houses have been very scarce
indeed the past winter- If they \{wered $\}$ not
killed off-I cannot but think that
their instinct fore saw that the river
The river has been at summer
// would not rise. level through the winter up ${ }^{2}$ to April!!
I returned down the middle of the
river to near the Hub. bridge without $\{\ddagger\}$ seeing
// any opening
Some of the earliest plants are now
not started because covered with snow-as
the stellaria \& shepherd's purse-
Others like the Carex-Penn.-the crowfoot-
saxifrage-Callitriche-are either covered
I think it must be partly owing to the want of rain \& not wholly to the snow that the first 3 are so backward
or recently uncovered- ^
The white maples-\& hazles-and for the most part the alders still stand in snowalders on the bare place
Yet those ^ by the skunk cabbage, above named, appear to be no more forward! Maybe, trees rising so high are more affected by cold winds than herbaceous plants. April $3{ }^{\text {d }} 56$
When I awoke this morning-I heard the almost forgotten sound of rain on the roof- I think there has not been any of any consequence since Christmas
day- Looking out I see the air
that
full of fog \& ^ the snow has gone off wonderfully during the night-the drifts have settled \& the patches of bare ground extended themselves- $\$^{1}$ the river is fast spread ing over the meadows. The pattering of the rain is a soothing slumberous sound which tempts me to lie late- Yet there is more fog than rain. Here then at last is the end of the sleighing-which began the $25^{\text {th }}$ of // December- Not including that date \& today it has lasted 99 days- I hear that will
Young Desmond of the Factory ^ have ${ }^{2}$ come into town 100 times in his sleigh the ${ }^{3}$ he past winter, if he comes today-having come probably once in a day.

Pm to Hunt's Bridge-
It is surprising how the earth on bare south banks begins ${ }^{4}$ to show some green- //5 ness in its russet cheeks in this rain \& fog- A precious emerald green tinge--almost like a green mildew, the growth of the night-a green blush suffusing her cheek-heralded by twittering birdsThis sight is no less interesting than the corresponding bloom \& ripe blush of the fall. How encouraging to perceive again that faint tinge of greenspreading amid the russet on earth's

[^74]5"//" written over hyphen following "green" for lack of space, most likely not cancelling the hyphen
cheeks! I revive with nature-her
victory is mine. This is my jewelry.
It rains very little, but a dense fog-
15 or 20 feet high, rests on the earth
all day spiriting away the snow-Behind
which the cockerels crow \& a few birds
sing or twitter. The Osiers look light
\& fresh in the rain \& fog-like the
Close at hand they are seen to be beaded with drops from the fog
grass ${ }^{\wedge}$ - There seems to be a little life in
the bark now \& it strips somewhat more
freely than in winter. What a lusty growth
have these yellow osiers 6 feet is com-
mon-the last year-chiefly from
the summit of the pollards-(but
also from the sides of the trunk) filling
a quadrant densely with their yellow
rays $-^{1}$ The white maple buds on the s side of some trees-have slightly opened so that I can peep in to their cavities \& This happened in Feb (!) 57
// detect the stamens ^- They will prob. come
next to the skunk cabbage this year-
if the cowslip does not- Yet the trees
stand in the midst of the old snow-
I see small flocks of robins sunning
on the bared portions of the meadowhear the sprayey tinkle of the song-sparrow along the hedges- Hear also the squeaking notes of an advancing flock
? or grackles?-am uncertain which makes that squeak?
of red-wings ^ some where high in the sky-
At length detect them high over head
advancing N. E. in loose array with
a broad extended front-competing
with each other $\quad \therefore \Rightarrow$ winging their way
to some northern $\because \because$ meadow which
they remember. $\quad \because \quad$ The note of some
is like the squeaking of many signs,
while others accompany them with a dry
steady ^ tchuck-tchuck
Hosmer is overhauling a vast heap of manure in the rear of his barn turning the ice within it up to the sumtlight- Yet he asks despairingly what life is for-\& says he does not expect to stay here long. But I have just come from reading Columella who describes the same kind of spring workin that to him new spring of the world-with hope-\& I suggest to be brave \& hopeful with nature. Human life may be transitory \& full of trouble but the perennial mind whose survey ${ }^{1}$ extends from that spring to this-from Columella to Hosmer-is superior to change. I will identify myself with that which did not die with Columella ${ }^{2}$ \& will not die with HosmerComing home along the causeway a robin sings, though faintly as in mayThe road is a path-here and there shovelled through drifts which are considerably higher than a mans head on each side.

People are talking about
my Uncle Charles- Minott tells how
he heard Tilly Brown once asking him (inside?
to show him a peculiar ${ }^{\wedge}$ lock in wrestling- "Now dont hurt me-dont throw me hard"- He struck his antagonist in side his knees with his feet \& so deprived him of his legs.

Hosmer remembers his tricks in the barroom-shuffling cards \&c he could do any thing with cards- Yet he did not gamble- He would toss up his hat twirling it over \& over \& catch it on his head invariably. Once wanted to live at Hosmers-but the latter was afraid of him- "Cant we study up something?" he asked- H. asked him into the house-\& brought out apples \& cider-\& Charles-talked- "You!" said he "I burst the bully of Lowell" (or Haverhill?) He wanted to wrestlewould not be put off- Well we wont wrestle in the house- So they went out to the yard \& a crowd got round. "Come spread some straw here" said C. "I do'nt want to hurt him." He threw him at he told them to spread more straw once- They tried again $\wedge$ \& he "burst" him

He had a strong head-\& never got drunk-would drink gin sometimes but not to excess- Did not use tobacco except snuff out of another's box
sometimes-was very neat in his personWas not profane-though vulgar.

Very few men take a wide survey-their
knowledge is very limited \& particular- I
talked with an old man the other day about the snow-hoping he could give me some information about past winters. I said I guess you dont remember so much old snow on the ground at this seasonHe answered- "I never saw the snow

The same man in summer of 59-said he never saw the river so low!! Of what use to be old? so deep between my ^ house \& John's."

It wasnt a stones through
Uncle Charles used to say that he hadn't a single tooth in his head- The fact was they were all double-\& I have heard that he lost about all of them by the time he was 21- Ever since I knew him he could swallow his nose-

The river is $\{-\}$ now generally \& rapidly breaking
up- It is surprising what progress has been
made since yesterday. It is now generally open about the town. It has gradually worn \& melted away at the bends where it is shallow \& swift \& now small pieces are breaking off around the edges \& floating down these reaches- It is not generally floated off but dissolved \& melted where it isfor the open reaches gradually extendthemselves till they meet-\& there is no space or escape for floating ice
in any quantity until the ice is all gone.
from the channel- I think that
what I have seen floating in former
years is commonly such as had risen
up afterward from the bottom of of flooded meadows. Sometimes however you observe great masses of floating ice-consisting of that which is later to break up-the thicker \& more lasting ice from the broad bays or between bridges.

There is now an open water passage
on each side of the broad field of ice in the bay above the R. R. The
// water which is rapidly rising has over-
flowed the icy snow on the meadows which is seen a couple of feet beneath it-for there is no true ice thereIt is this rising of the water that breaks up the ice more than any thing. The Mill brook has risen much higher comparatively than the river.

Apr $4^{\text {th }}{ }^{\prime} 56$
// Pm to Clam Shell \&c-
The alder scales $S$ of the R. R. beyond the bridge are loosened- This corresponds to the opening (not merely expansion showing the fuzziness) of the Wht maple budsThere is still but little rain-but the fog of yesterday still rests on
the earth- My neighbor says it is the //
frost coming out of the ground. This perhaps is not the best description of it.
It is rather the moisture in this warm air-condensed by contact with the snow \& ice \& frozen ground. Where the fields are bare I slump now 3 or 4 inches into the oozy surface. Also on the bare brows of hills clad with cladonias- These are as full of water as a sponge-
The muskrats no doubt are now being driven out of the banks. I hear as I walk along the shore the dull sound of guns-prob. most of them fired at musk-rats-borne along the river from different parts of the town-one every two or 3 minutes-

Already I heare of a small fire in the woods in Emerson's lot set by the Engine-the leaves that are bare are so dry
I find many sound cabbages shedding their pollen under Clam Shell ${ }^{1}$ Hill. They ${ }^{2}$ are even more forward generally here than at Well Meadow- Probably now dead
2 or 3 only ^ among the alders at the last place, were earlier. This is simply the earliest flower such a season as thisi.e. when the ground continues covered with snow till very late in the spring. For this plant occupies ground which is the earliest to be laid bare-those great dimples in the snow about a
springy place in the meadow-
5 or 10 feet over-where the sun \& light have access to the earth-a month before it is generally bare- In such
localities then they will enjoy an advantage
over most other plants-for they will
not have to contend with abundance
of snow-but only with the cold air-
which may be no severer than usual.
Cowslips \& a few other plants sometimes
enjoy the same advantage. Sometimes
apparently the original-now outer spathe has been frostbitten \& is decayed
\& a fresh one is pushing up- I see
some of these in full bloom though
the opening to their tents is not more effectually protected
than $1 / 2$ inch wide-^ they are lapped
like tent doors- Methinks most of these hoods open to the south.
It is remarkable how completely the spadix is protected from the weather
-first by the ample hood whose walls are distant from it-next by the narrow tent-like door way admitting air \& light \& sun-generally I think on the $S$ sideand also by its pointed top curved
downward protectingly over it- It
with powdered
looks like a monk in his crypt- head.
The sides of the door way are \{lapped\} or folded \& one is considerably in ad-
vance of the other. It is contrived best to catch the vernal warmth \& exclude the winters cold. Notwithstanding all the snow the Cabbage is earlier than last year-when it was also the earliest flower-\& blossomed on the $5^{\text {th }}$ of AprilIt is perhaps owing to the long continued warm weather from Mar $13^{\text {th }}$ to $28^{\text {th }}$
Yet it has been a hard winter for many plants-on dry exposed hills- I am surprised to see the Clover cinquefoil \&c \&c-on the top of the bank at Clam Shell-completelywithered \& straw-colored- Prob. from the snow resting on it so long \& incessantly.
And plants that grow on high land are more back ward than last year.
The ground no sooner begins to be bare to a considerable extent than I see a marshhawk or harrier.
The sap of the white birch at Clam shell begins to flow-
Ap. 5
The April weather still continues- It looks
repeatedly as if the sun would shine-\&
it rains in 5 minutes after. I look out
to see how much the river has risen
Last night there were a great many
they are engulfed \&
portions or islets visible-now ${ }^{\wedge}$ it is a smooth
expanse of water \& icy snow- The water has
been steadily deepening on Concord meadows //
all night-rising with a dimple about every stem \& bush.

Pm to North River at Tarbell's-
Fair weather again. Saw half a //
dozen black-birds uttering that sign
like note on the top of Cheney's elm-
but noticed ${ }^{1}$ no red at this distance-
$\mathrm{Hear}^{2}$ after-some red-wings
// were they grackles-? sing boby-lee. Do these ever make the sign-like note? is not their's a fine shrill whistle?
The ice from the sides of the rivers ${ }^{3}$ has
wheeled round in great cakes \& lodged against each of the RR. bridges (i.e. over each stream)- Near the town there is the firmest body of ice (in the river proper above Hubbards bridge. A warm \& pleasant afternoon. The river not yet so high by 4 or ${ }^{4} 5$ feet as last winter. Hear on all sunny hill sides -where the snow is melted-the chinkclicking notes of the F. hiemalis flitting before me- I am sitting on the dried grass on the S . hill side behind Tarbell's houseon the way to Brown's- These birds know where there is a warm hill side as well as we. The warble of the blue-bird is in the air- From Tarbell's bank we had look over the bright moving flood-of the Assabet ${ }^{5}$ with many maples standing in it-the purling \& eddying stream-with a hundred rills of snow water tinkling into it. Further toward J. P. Browns saw 2 large ant hills-(red before black
// abdomens) quite covered on all the sunny portion with Ants which appeared to have come forth quite-

[^75]recently-\& were removing obstructions
from their portals. Probably the frost is quite out there. Their black abdomens glistened in the sun- Each was bringing up some rubbish from beneath. The outlines of one of these hills was a very regular cone- $\uparrow$ both were graceful curves- Came out upon the high terrace behind Hosmer's-where we overlooked the bright blue flood alternating with fields of ice-(we being on the same side with the sun.) The first sight of the blue water in the spring is exhilirating- Saw half a dozen white shell drakes in the meadow-where Nut. Mead. Brook was covered with the flood. There were 2 or 3 females with them. These ducks would all swim together first a little way to the right-then suddenly turn together \& swim to the left-from time to time making the water fly in a white spray-ap with a wing. Nearly half a mile off I could see their green crests in the sun- They were partly concealed by some floating pieces of ice \& snow which they resembled- On the hill beyond ${ }^{1}$ Clam-shell scared up 2 ap. Turtle-doves-

It is that walking when we must pick the hardest \& highest ground or ice-for we commonly sink several inches in the oozy surface-

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\underset{\text { i.e. Lily }}{\text { Ap } 6^{\text {th }} \text { ' } 56}
$$

7 Am To ${ }^{1}$ Willow Bay- The meadow has frozen over-skimmed over in the nightthe ducks must have had a cold night of it // ? I thought heard white-bellied swallows over prob. for they surely came next morn. the house before I arose. ^ The hedges They twitter over the house only in the morn. at first resound with the song of the song-sparrowHe sits high on a spray singing-while I stand near-but suddenly becoming alarmed drops down \& skulks behind the bushes close to the ground-gradually removing
? far to one side. I am not certain but I have seen the grass bird-as well as song-spar this year-(on the $2^{\text {nd }}$ no-prob not for it has no dark splashes on throat-v $7^{\text {th }}$ prox.) ult-^) a sparrow with a light breast \& less brown about the cheeks \& headThe song sparrow I see now has a very brown breast. What a sly skulking fellow- I have a glimpse of him skulking behind a stone-or a bush next to the ground-or perhaps he drops into a ditch just before me-\& when I run forward he ${ }^{2}$ is not to $\{$ to $\}$ be seen in it-having flitted down it 4 or 5 rods to where it intersected with another-\& then up that-all beneath the level of the surface-till
he is in the rear of me.
Just beyond Wood's3 Bridge-I hear
// the Pewee. With 4 what confidence
after the lapse of many months, I come out to this water side-some warm \& pleasant spring morning-\& listening-hear from farther or nearer-through the still concave of the air-the note of the first pewee. If there is one within half a mile-it will be here- $\&^{1}$ I shall be sure to hear to hear its simple notes from those trees-borne over the water. It is remarkable how large a mansion of the air you can explore with your ears in the still morning by the water side.
I can dig in the garden now where the snow is / / gone. And even under 6 inches of snow \& ice I make out to get through the frost with a spade- The frost will all be out about as soon as last year-for the melting of the snow has been taking it out- It is remarkable how rapidly the ground driesfor where the frost is out-the water does not stand but is soaked up.

There has been no skating the last winter
the snow having covered the ice immediately \& not melting
after it formed-^ \& the river not rising till april-when it was too warm to freeze thick enough-
As we sat yesterday under the warm dry
hillside amid the F. hiemalis-by Tarbell's
I notice the first ${ }^{2}$ bluish haze-a small
patch of it over the true Nut ${ }^{3}$ meadow blue pine
seen against the further ${ }^{\wedge}$ forest-over
low
the near ^ yellow one. This was of course the
subtile vapor which the warmth of the day raised from Nut MeadowThis, while a large part of the landscape was covered with snow-an affecting announcement of the approach of summerThe one wood seemed but an underwood on the edge of the other-yet all nut meadow's varied surface-intervened-with its brook\& its cranberries-its sweet-gale, alder, \& willow\& this was its blue feather-!
P. m. To Hubbard's $2^{\text {nd }}$ Grove $^{1}$ by River,At Ivy tree-hear the fine tseep
// of a sparrow-\& detect the fox colored sparrow-on the lower twigs of the willows \& from time to time scratching the ground beneath- It is quite tame-a single one with its ashy head \& mottled breast. It is a still \& warm-overcast afternoon and I am come forth to look for ducks on the smooth reflecting water which has suddenly surrounded the villagewater half covered with ice or icy snowOn the $2^{d}$ ult it was a winter landscape -a narrow river \& only covered thick with ice for the most part-\& only snow on the meadows- In 3 or 4 days the scene is changed to these vernal lakes-\& the ground more than half bare. The reflecting water alternating with unreflecting ice.
Apparently song sparrows may have the dark splash on each side of the throat

[^76]but be more often brown on the breast \& head-some are quite light some quite dark- Here is one of the light headed on the top of an apple tree-sings unweariedly at regular intervals-something like faster \& faster
tchulp / chilt chilt, chilt chilt, chilt chilt, chilt chilt / tuller tchay ter splay-ee / The last or $3{ }^{\text {d }}$ bar I am not sure about- It flew too soon for me. I only remember that the last part was sprinkled on the air-like drops from a rill-as if its strain were moulded by the strain spray it sat upon- Now see considerable flocks of robins hopping \& running in the meadows-crows next the water edge on small isles in the meadow.
As I am going along the Corner road by
hear \&
the meadow mouse brook-^ see a quarter of a mile NW-on those conspicuous white oaks near the river in Hubbs $2^{\text {nd }}$ grove-the crows buffetting some intruderThe crows had betrayed to me some large bird of the hawk kind which they were buffet ting- I suspected it before I looked carefully. I saw several crows on the oaks \& also what looked to my naked eye like a cluster of the palest \& most withered oak leaves with a black base about as big as a crow- Looking with
my glass I saw that it was a great
bird- The crows sat about a rod
off higher up while another crow was
occasionally diving at him-\& all were cawing- The great bird was just
starting- It was chiefly a dirty white ${ }^{1}$
with great broad wings with black tips
\& black on other parts-giving it
the appearance of dirty white barred with
black- I am not sure whether it was
// a white headed eagle or a fish hawk-
There appeared much more white than belongs to either-\& more black than
the fish hawk has- It rose \& wheeled flapping several times till it got under way-then with its rear to me presenting
the least surface-it moved off steadily over the woods N . W .
in its orbit ^ with the slightest possible
undulation of its wings-a noble
like saturn with its ring seen edgewise
planetary motion-^ It is so rare
that we see a large body self sustained
in the air- While crows sat still
\& intent-\& confessed their Lord ${ }^{2}$ -
Through my glass I saw the outlines
against the sky
of this sphere ^ trembling with life \& of
power-as it skimmed the topmost twigs
of the wood-Toward some more
solitary oak amid the meadows.
To my naked eye it showed only

[^77]so much black as a crow in its talons
might- Was it not the White headed eagle in the state when it is called the sea eagle? neck feathers
Perhaps its ^ erest were ${ }^{1}$ erected.
I went to the oaks-heard there a Nuthatch's ${ }^{2}$
faint vibrating tut-tut-somewhat even like croaking of frogs--as it made its way up the oak bark-\& turned head down to peck. Anon it answered its mate with a gnah gnah Smelt a skunk on my return at Hubbards blue berry swamp-which some dogs that had been barking there for half an hour had probably worried-for I did not smell it when I went along first. I smelt this all the way thence home the wind being S. W. \& it was quite as perceptible in our yard as at the swamp- The family had already noticed it-\& you might have supposed that there was a skunk in the yard-yet it was $3 / 4$ of a mile off at least. April 7 Monday-
Launched my boat. through 2 or 3 rods
of ice on the river side-half of which froze last night. The meadow is skimmed over-but by mid-forenoon it is melted.

Pm - Up river in boat-
The first boats I have seen are out today-after muskrats \&c- Saw one this morning breaking its way far through the meadow in the ice that had formed in the night. How independent they look who have come forth ${ }^{3}$ for a

[^78]day's excursion- Melvin is out-
\& Goodwin-\& another boat still.
They can just row through the thinnest of the ice- The first boat on the mead ows is exciting as the first flower or swallow It is seen stealing along in the sun under the meadow's edge- One breaks the ice before it with a paddle while the other pushes or paddles-\& it grates ${ }^{1} \&$ wears against the bows.
// We see Goodwin skinning the muskrats
he killed this forenoon on bank at Lee's Hill
\& mutilated
leaving their red ${ }^{\wedge}$ carcasses behind. He says
// he saw a few geese go over the Great meadows on the $6^{\text {th }}$ ult- The half of the meadows next the river or more is covered with snow ice at the bottom-which from time to time rises up \& floats-off
-there \& more solid cakes from over the river-clog the stream where it is least broken up-bridging it quite overGreat cakes rest against every bridge.
We were but just able to get under the stone arches by lying flat \& pressing our boat down-after breaking up a large cake of ice which had lodged against the upper side. Before we get to clam shell-see Melvin ahead
// scare up 2 black ducks-which
make a wide circuit to avoid
both him \& us- Shell drakes pass
also with their heavy bodies- See the red \& black bodies of more muskrats left on the bank at Clam shell-which the crows have already attacked- Their hind legs are half-webbed-the fore legs not at all. Their paunches are full ap. of chewed roots-yellowish-\& bluish- Goodwin says perhaps
they are fatter than usual-^-because they have not been driven out of their holes heretofore. The open channel is now either over ${ }^{1}$ the river or on the upper side of the meadows-next the woods-\& hills- Melvin² floats slowly \& quietly along the willows watching for rats resting there-his white hound sitting still \& grave in the prow-\& every little while we hear his gun announcing the death of a rat or 2 . The dog looks on understandingly \& makes no motion. A the Hubbard bridge we hear the incessant note of the Phoebe- Pevet--pe-e-vet-pevée Its innocent somewhat impatient call. Surprised to find the river not broken up just above this // bridge \& as far as we can see-prob through F. H. Pond-prob. in some places you can cross the river still on the ice. Yet we make very narrow
our way with some difficulty-through a ^ channel over the meadow \& drawing our boat over the ice on the river-as far at foot of Fair Haven.- See clams fresh opened\& roots \& leaf ${ }^{3}$ buds left by rats on the edge of the ice \& see the rats there

By rocking our boat \& using our paddles can make our way through the softened ice 6 inches or more in thickness.

The tops of young young white birches now have a red-pink color- Leave boat there-
// See a yel. spot tortoise in a ditch
// \& a bay-wing sparrow- It has no dark splash on throat. - \& has a light or grey head.

Ap. $8^{\text {th }}$ ' 56
1 Pm to boat-at Cardinal Shore-\& thence to Well Meadow \& back to Port-

Another very pleasant \& warm day- The White-bellied swallows have paid us twittering visits the last 3 mornings You must rush out quickly to see them for they are at once gone again.
// Warm enough to do without great coat today \& yesterday though I carry it \& put it on when I leave the boat.

Hear the crack of Goodwin's piece
close by just as I reach my boat-
Asks if I am bound up stream- Yes to Well Meadow He has killed another rat- ^ Says I can't get above the hay path $1 / 4$ of a mile above on ac. of ice-if he could he'd a been at Well-Meadow before now.

But I think I will try-may be \& he thinks if I succeed he will try it-1 By standing on oars which sink several inches \& hauling over one cake of ice I manage to break my way into an open canal above-where I soon see 3 rats swimming- Goodwin says that
he got 24 minks last winter-more
than ever before in one season-trapped most shot only 2 or 3- From opposite Bittern Cliff to Well meadow brook I pushed along with more or less difficulty to Well meadow Brook- There 10 feet wide
was a water passage-^ where the river had risen beyond the edge of the ice-but not more than 4 or 5 feet was clear of the bushes \& trees- By the side of fair Haven Pond-it was particularly narrow- I shaved the ice on the one hand \& the bushes \& trees on the other all the way- Nor was the passage much wider below as far back as where I had taken my boat. For all this distance the river for the most part, as well as the Pond-was an unbroken // field of ice. I went winding my way \& scraping between the maples- Half a dozen rods off on the ice you would not have supposed a boat that there was room for a boat there- In some places you could have got on to the ice from the shore without much difficulty- But all of well meadow paddled
was free of ice-\& I sailed up to within a rod or 2 of where I found the cowslips so forward on the $2^{\text {nd }}$ ult. It is difficult pushing a boat over the meadows nowfor even where the bottom is not covered with slippery snow ice which affords no
hold-to the paddle-the meadow is frozen \& icy hard-for it thaws slowly under water. This meadow is compleley open because none of the snow ice has risen up- Sometimes you see a small piece that has been released come up suddenly with such force as to lift it partly out of water-but sinking again at once-it looks like a shelldrake which has/dived at a distanceThere in that slow muddy brook near the head of Well Meadow-within a few rods of its souce-where it winds amid the alders-which shelter the plants somewhat-while they are open enough now to admit the sun-I find 2 // cowslips ${ }^{1}$ in full bloom-shedding pollen \& they may have opened 2 or 3 days ago; for ${ }^{2}$ I saw many conspicuous buds here on the $2^{\text {nd }}$ which now I do not seeThey seem to not ${ }^{3}$ been eaten off?4 Do we Have they not not often lose the earliest flowers thus?
A little more-or if the river had risen as high as frequently-they would have been submerged- What an arctic voyage was this in which to find cowslipsthe Pond \& river still frozen over for the most part as far down as Cardinal Shore!
Saw 2 marsh hawks this pm circling low over the meadowsalong the water's edge-this shows that-frogs must be out

Goodwin \& Puffer both fired at one
from W m Wheeler's shore- The
They say they made him duck \& disturbed his feathers some.
muskrats are now very fat- They are reddish brown beneath $-\&$ dark brown above. I see not a duck in all this ${ }^{1}$ voyage-perhaps they are moving forward this bright \& warm day. Was obliged to come down as far as Nut meadow-(being on the west side-) before I could clear the ice-\& setting my sail tack across the meadow for home- The wind N westerly- The river is still higher ${ }^{2}$ than yesterday.
-About 8 1/2 Pm-hear geese passing -quite low over the river- // Found beneath the surface in the sphagnum near the cowslips a collection of little hard nutswith wrinkled shells a little like nutmegs-perhaps bass nuts-collected after a freshet by mice! I noticed that the fibres of the alder roots in the same place were thickly with little yellow knubby fruit- Was not that clear light brown snail in that sphagnum a diff. //
species from the common one in brooks?
See a few cranberries \& smell muskrats-
On the F. H. Cliff crowfoot \& saxifrage
are very backward- That dense growing moss on the rocks-shows now a level surface of pretty crimson cups.

Noticed returning this P. m. a muskrat sitting near a small hole
on the ice ^ in Willow ${ }^{3}$ Bay- So motionless \& withal round \& featureless-of so uniform
a color-that half a dozen rods off

[^79]I should not have detected him-if not accustomed to observing them- Saw the same thing yesterday, ${ }^{1}$ It reminds me of the truth of the Indians name for it "That sits with in a round form on the ice-" You would think it was a particular ly round clod of meadow mud rising above the ice- But while you look it concludes its meditations-or perchance its meal \& deliberately takes itself off off through a hole at its feet-\& you see no more of him. I noticed 5 muskrats this Pm without looking for them very carefully-4 were swimming in the usual manner-showing the vertical tail-\& plunging with a half summer set suddenly before my boat- While you are looking these brown clods slide off the edge of the ice \& it is left bareYou would think that so large an animal sitting right out upon the ice would be sure to be seen-or detected-but not so- A citizen might paddle within 2 rods \& not suspect them- Most countrymen might paddle 5 miles along the river now \& not see one muskrat$1 / 4$ of a mile before or While a sportsman ^ behind would be shooting one or more every 5 minutesThe other left to himself might not be able to guess what he was firing at.

The marsh-hawks flew in their usual irregular low tacking-wheeling \& circling flight-leisurely flapping \& beating now rising now falling in conformity with the contour of the ground.
The last I think I have seen on the same beat in former years-he \& his race must be well acquainted with the Musketicook \& its meadows. No sooner is the snow off than he is back to his old haunts-scanning that part of the meadows that is bare while the rest is melting- If he returns from so far-to these meadows-shall the

River had risen so since yesterday I could not get under the bridge sons of Concord be leaving them at this
but was obliged to find a round stick \& roll my boat over the road.
season-for slight cause?
Wednesday April $9^{\text {th }}$
Another fine day-7 Am to Trillium woodsair full of birds- The line I have measured W of $R R$ is now just bare of snow-though a broad \& deep bank of it lies between that line \& the RR-E of RR has been bare some time. The line in Trillium woods is ap. just bare also. There is just about as much snow in these woods now as in the meadows and fields around generally-i.e. it is con-

There is not so much as on the E side of Lee's Hill
fined to the coldest sides-as in them. ${ }^{\wedge}$ It is toward ${ }^{1}$ the $\mathrm{N} \& E$ sides of the wood. Hence-ap. in a level wood of this character the snow lies no longer than in adjacent fields divided by fences \&c-or even without them.

The air is full of birds and as I go down
// the cause way I distinguish the seringo note- You have only to come forth each morning to be surely advertised of each new commer into these broad meadows- Many ${ }^{1}$ a larger animal might lie concealed, but a cunning ear detects the arrival of each new species of bird- These birds give evidence that they prefer the fields of New England to all other climes-deserting for them the warm \& fertile south-here is their paradise- It is here they express the most happiness by song \& action- Though these spring mornings may often be frosty \& rude-they are exactly tempered to their constitutions-\& call forth their sweetest strains- The yellow birch sap // has flowed abundantly-prob before the white birch.
\{Muhlenbergii\}
8 Am-by boat to V. Palmata ${ }^{2}$
Swamp-for White ${ }^{3}$ birch sap.
// Leave behind great coat- The waters have stolen higher still in the night around the village-bathing higher its dry fences \& its ^ withered grass stems with a dimple-See that broad smooth vernal lake-like a painted lake-not a breath disturbing it- The sun \& warmth \& smooth water \& birds make it a carnival of nature's- I am surprised
when I perceive men going about their ordinary occupations- I presume that before 10 o'clock at least all the villagers will have come down to the bank \& looked over this
bright \& placid flood-the child \& the man-the house-keeper \& the invalideEven as the village beholds itself reflected in it- How much would be subtracted from the day if the water was taken away. This liquid transparency-of melted snows partially warmed-spread over the russet surface of the earth! It is certainly important that there be some priests-some worshippers of nature- I do not imagine any thing going on today away from \& out of sight of the water side. Early aspen catkins have curved downward an //
inch-\& began to shed pollen ap yesterday X White
maples also the sunny sides of clusters \& sunny sides //
of trees in favorable localities shed pollen today X
I hear the note of a lark amid the other //
birds on the meadow- For two or three days
have heard delivered oftener \& with greater emphasis the loud clear sweet phobe ${ }^{1}$
note of the chicadee-elicited by the warmth. //
Cut across Hosmer's mead from Island to
still rising
black oak creek-where the river ^ is breaking over with a rush \& a rippling - Paddled quite to the head of Pinxter swamp where were 2 black
ducks amid the maples-which went off with a hoarse quacking-leaving a feather on the smooth dark water amid the fallen tree tops \& over the bottom of red leaves. Set 2 sumach spouts in a large white Southward
birch in the ^ swamp-\& hung a tin pail to them\& set off to find a yel- birch- Wandering over that high huckleberry pasture I hear-the
// sweet jingle of the F. juncorum- In a leafy pool in the low wood toward the river see hear a rustling-\& see yel spot tortoises dropping off an islet-\& into the dark stagnant water-\& 4 or 5 more lying motionless on the dry leaves of the shore \& of islets about. Their spots are not very conspicuous out of water-and in most dangerThe warmth of the day has penetrated into these low swampy woods on the NW of the hill-\& awakened the tortoises from their winter sleep. These are the only kind of tortoise Probably I have seen this year. Perhaps Because ${ }^{1}$ the river did not rise earlier \& the brooks break \& thaw them out. When I looked about I saw the shining black backs of 4 or 5 still left-\& when I threw snow balls at them they would not move- Yet from time to time I walk 4 or 5 rods over deep snow banks-slumping in on the N \& E sides of hills \& woods'- Ap. they love to feel the sun on their shells-As I walk in woods where the dry leaves are just laid bare-I see the bright red berries of the solomon seal still here \& there above the leaves. -affording food no doubt for some creature. Not finding other birches

I returned to the $1^{\text {st }}$ swamp \& tapped 2 more white birches. They flow generally faster than the red or white maples when I tried them.
I sit on a rock in the warm sunny swampwhere the ground is bare-\& wait for my vessels to be filled- $\mathrm{It}^{1}$ is perfectly warm \& perhaps drier there than even here- The great butterflies-black with buff-edged wings are fluttering about-\& flies are hovering over this rock- the spathes of the skunk cabbage stand thickly amid the obvious
dead leaves-almost the only ^ sign of vegetable life. A few rods off I hear some sparrows busily scratching the floor of the swamp-uttering a faint streep streep $-\&$ from time to time a sweet strain- It is prob. the fox-col. sparrowwoody
These always feed thus I think in ^ swamps. a flock of them rapidly advancing-flying before one another through the swamp- A robin peeping at a distance is mistaken for a hyla-A gun fired at a muskrat on the other side of the island towards the village-sounds like planks thrown down from a scaffold-borne over Meanwhile I hear the sap dropping into my pailthe water- ^ The birch sap flows thus copiously other before there is any ^ sign of life in the treethe buds not visibly swolen- Yet the aspen though in bloom shows no sap when I cut it nor does the alder. Will their sap flow later? Prob. this birch sap like the maple flows little if any at night.

It is remarkable that this dead looking
that a stock should
trunk should observe such seasons ${ }^{-1}$ distinguish between day \& night-

When I return to my boat I see the snow fleas like powder in patches on the surface of the smooth water amid the twigs \& leaves- I had paddled far into the swamp amid the willows \& maples- The flood has reached \& upset \& is floating off the choppers corded wood- Little did he think of this thief. It is quite hazy today- The red-wing's o'gurgle-ee-e-is in singular harmony with the sound \& impression of the lapsing stream or the smooth swelling flood beneath his perch- He gives expression to the flood. The water reaches far in amid the trees on which he sits-\& they seem like a water organ played on by the flood-the sound rises up through their pipes.
There was no wind \& the water was perfectly smooth-a sabbath stillness till 11 A. m.
// We have had scarcely any wind for a month. Now look out for fires in the woods for the leaves are never so dry \& ready to burn as now- The snow is no sooner gone-nay it may still cover the N \& E sides of hills-when a day or 2's sun $^{2} \&$ wind-will prepare the leaves to catch at the last spark- Indeed there are such leaves as have never yet been wet-as have blown about \& collected
in heaps on the snow \& they would burn there in midwinter, though the fire could not spread much-

If the ground were covered with snow would any
degree of warmth produce a blue haze like this?

- But such a fire can only run up the S \& SW sides of hills-at this season- It will stop at the summit \& not advance forward far nor descend at all toward the $\mathrm{N} \& \mathrm{E}$.

Pm Up RRA very warm day
The Alnus incana by the causeway Hbut especially //
by the RR op. the oaks sheds pollen X At the $1^{\text {st }}$ named alder-saw a striped snake, which
prob I had scared into the water from the warm RR-bank-, its head erect as it lay on the bottom \& swaying back \& forth with the waves which were quite highthough considerably above it. I stood there 5 minutes at least-\& prob. it could remainthere an indefinite period.

The wind has now risen a warm, but pretty strong southerly wind-\& is breaking up those parts of the river which are yet closed- The great mass of ice at Willow Bay has drifted down against the RR bridge. I see no ducks-\& it is too windy for muskrat shooters- In a leafy pool by RR which will soon dry up I see large skater insects-where the snow is not all melted. The willow catkins there near the oaks show the red of their scales at the base of the catkins
crimson
dimly through their down-a warm ^ glow or blush- They are an inch long-others about as much advanced but rounded-
? They will perhaps blosom by day after tomorrow-
? \& the hazels on the hill side beyond as soon at least if not sooner- They are loose \& begin to

The stigmas already peep out minute crimson stars-Mars.
dangle. ^ The skaters are as forward to play
on the first smooth \& melted pool-as boys
on the first piece of ice in the winter. It must
be cold to their feet. I go off a little to the right
of the RR \& sit on the edge of that sand
crater near the spring by the RR- Sitting
curled
there on the warm bank-above the broad
of $\wedge$ early sedge grass showing a little green amid russet banks ^ \& dry leaves at base
shallow crystalline pool on the sand ${ }^{\wedge}-\mathrm{I}$
// hear one hyla peep faintly several times.
This is then a degree of warmth sufficient for the hyla- He is the first of his race to awaken to the new year-\& pierce the solitude with his voice.
He shall wear the medal for this year.
You hear him but you will never find him. $\mathrm{He}^{1}$ is somewhere down amid the withered sedge \& alder bushes there by the water's edge-but where?
From that quarter his shrill blast soundedbut he is silent again Hfor $\{$ th - $\}$ \& a \{eould $\}$ kingdom will not buy it again

The communications from the gods to us are still deep \& sweet indeed-but scanty \& transient -enough only to keep alive the memory of the past. I remarked how many old people died off on the approach of the present
It is said that when the sap begins to flow in the trees our diseases become more violent
spring. ${ }^{\wedge}$ It is now advancing toward
summer apace \& we seem to be reserved
to taste ${ }^{2}$ its sweetness-but to perform
what Great ${ }^{3}$ deeds? Do we detect

[^80]also
the reason why we ${ }^{\wedge}$ did not die on the approach of Spring.

I measured a white oak stump just sawed off by the RR there averagin just 2 feet in diameter with 142 rings-another near by $11 / 2$ inches broader had but 105 rings.
While I am looking at the hazel I hear from the old locality-the edge of the great pines \& oaks in the swamp by the RR-the note of the Pine warbler it sounds far off \& faint-but coming out iron
\& sitting on the ^ rail- I am surprised to see it within 3 or 4 rods on the upper part of a white oak-where it is busily catching insects-hopping along toward the extremities of the limbs \& looking off on all side-2 ${ }^{\text {ce }}$ darting off like a wood pewee 2 rods over the RR-after an insect \& returning to the oak-\& from time to time uttering its simple rapidly iterated cool sounding notes- When heard a little within the wood they as he hops to that side the oak-they sound particularly cool \& inspiring like a part of the evergreen forest itself- -the trickling of the sapIts bright yellow or golden throat \& breast \&c are conspicuous-at this season-a greenish yellow above-with 2 white bars on its bluish brown wingsIt sits often with loose hung wings. \& forked tail.

Meanwhile a bluebird sits on the same oak 3 rods off pluming its wings- I hear faintly the warbling of one ${ }^{1}$ ap. $1 / 4$ a mile off \& very slow to detect that it is even this one before

[^81]me which in the intervals of pluming itself is apparently practising in an incredibly low voice. The water on the meadows now, looking with the sun is a far deeper \& more exciting blue than the heavens

The thermometer at 5 pm is $66+^{\circ}$ and it has prob. been $70^{\circ}$ or more \& the last 2 days have been nearly as warm.

This degree of heat then brings the F. juncorum
\& Pine warbler-\& awakes the hyla.
Thursday Ap $10^{\text {th }}$
Fast day- Some fields are dried sufficiently
for the games of ball-with which this season is commonly ushered in. I associate this day, when I can remember it, with games of base-ball played over behind the hills in the russet fields toward Sleepy Hollow where the snow was just melted \& dried up. $-\&$ also with the uncertainty I always experienced whether the shops would be shut -whether we should have an ordinary dinner an extraordinary one-or none at alland whether there would be more than one service at the meeting house-this last uncertainty old folks share with // me.- This is a windy day drying up the fields-the first we have had for a long time
Therien describes to me the diagonal notch he used to cut in maples \& birches (not having heard of boring) \& the half
round spout cut out of chestnut or other straight grained wood-with a half round chisel sharped and driven into a new-moon cut made by the partly side wise to the tree same tool. ^ This evidently injured the trees more than the auger. He says they used to boil the birch down to a syrup-\& he thought that the black birch would run more than any tree.
P.M. I set out to sail-the wind N. W. but it is so strong-\& I so feeble-that I gave it up- The waves dashed over into the boat \& with their sprinkling wet me half through in a few moments. Our meadow-sea looks as angry now as it ever can-I reach my port-\& go to Trillium Wood to get Yellow Birch sap. The deep cut is full of \{sat\} dust- This wind unlike yesterdays has a decidedly cold vein in it. The ditch by Trillium wood is strewn with yellowish hemlock leaves-which are still falling. In the still warmer \& broader continuation of this ditch south of the wood, in the SW recess-I see 3 or four frogs // jump in some prob. large R. palustris otherss quite small- They are in before I see them plainly \& bury themselves in the mud before I can distinguish them clearly- They were evidently sitting in the sun by that leafy ditch in that still \& warm nook- Let them beware of marsh-hawks- I saw also 4 yel- spot tortoises paddling about under the leaves on the bottom
there. Once they were all together. This ditch
is commonly dry in the summer-
I set 3 spouts in a tree 1 foot in diameter-\& hung on a quart pail
The yellow birch sap runs very fast- ^ While
then went to
I was going \& returning from looking at the golden Saxifrage in Hubbard's close-when I came back the pail was running over- This was about 3 Pm- Each spout dripped about as fast as my pulse-but when I left at 4 Pm it was not dropping so fast.
// The red maples here do not run at all now-nor did they yesterday- Yet one up the Assabet did yesterday. Apparently the early maples-have ceased to run.

We may now say that the ground // is bare-though we still see a few patches-or banks of snow on the especially on the N. E. sides of hills hill sides at a distance ${ }^{\wedge}$ You see much more snow looking westthan looking east. Thus does this memorable winter disappear at last. Here \& there its veteran snow banks spot the russet landscape. In the shade of walls \& north hill sides-\& cool hollows in the woods it is panting its life away. I look with more than usual respect-if not with regret-on its last dissolving traces.

Is not that a jungermannia which so adorns the golden epidermis of the yellow birch with its fine fingers?

I boil down about 2 quarts of this
yel. birch sap to-2 teaspoonfuls of a smart tasting syrup- I stopped there
else should have boiled it all away. A slightly medicinal taste-yet not disagreeable to me- It yields but little sugar then.

$$
\text { Ap. } 11^{\text {th }}
$$

8 1/2 Am. To Tarbells-to get Black- \&
Canoe-birch sap-

> rusty

Going up the RR I see a male \& female ^ grackle //
alight on an oak near me-the latter apparently a flaxen brown-with a black tail- She looks like a different species of bird- Wilson had heard only a tchuk from the grackle-but this male who was courting his mate-broke into incipient warbleslike a bubble burst as soon as it came to the surface-it was so aerated- Its air would not be fixed long enough. Set 2 spouts in a canoebirch 15 inch diameter-\& 2 in a black birch $2^{\mathrm{ft}}+$ in diameter. Saw a king fisher on //
does not its arrival mark some new movement-in its finny prey? he ${ }^{1}$ the bright buoy that betrays it!
a tree over the water. ^ \& hear in the old place the pitch pine grove on the bank by the river-the pleasant singing note of the pine warbler-its a-che, vitter vitter, vitter vitter, vitter vitter, vitter vitter, vét. rings through the open pine grove-very rapidly. - I also heard it-at the old place by the RRas I came along. It is remarkable that I have so often heard it first in these 2 localities-i.e. Where the RR. skirts the N. edge of a small swamp-densely filled with old tall ^ white pines \& a few white oaks- And
in a young pit grove composed wholly of very
pitch pines on the otherwise bare ${ }^{\wedge}$ high \&
level bank of the Assabet- When the season is advanced enough- I am pretty sure to hear its ringing note in both those
// places. The hazel sheds pollen today X; some elsewhere possibly yesterday- The sallow up not till $13^{\text {th }} \mathrm{X}$
// RR will, if it is pleasant, tomorrow X
// When I cut or break white-pine twigs now the turpentine exudes copiously from the barkeven from twigs broken off in the fall \& now freshly broken $\wedge-$ clear as water, or crystal- How early did it? The Canoe birch sap flowed rather the fastest- I have now got 4 kinds of birch sap-that of the White birch is a little tinged brown ap. by the barkthe others are colorless as water I am struck by the coolness of the sap though the weather may be warm- Like wild apples-it must be tasted in the fields-\& then it has a very slightly sweetish \& acid taste \& cool as iced water- I do not think I could disof birch tinguish the different kinds ${ }^{\wedge}$ with my eyes shut- I drank some of the black birch wine with my dinner for the name of it- But as a steady drink to be recommended to it is only for ^ outdoor men \& foresters
// Now is ap. the very time to tap birches of all kinds.
I saved a bottle-full each of the White Canoe \& black-birch sap-(the yellow I boiled) \& in $2\{44\}$ hours they had
all ^ acquired a slight brown tinge. birch was the most brown They ${ }^{1}$ were at first colorless
On the whole I have not observed so much difference in the amount of sap flowing from the 6 kinds of trees which I have tapped-as I have observed between dif. trees of the same kind-depending on position \& size. \&c This flowing of the sap under the dull rinds of the trees is a tide which few suspect.

Though the snow melted so much sooner on the E side of the RR. causeway than on the WI notice that it still lies in a broad deep bank on the E side of Cheneys row of Arbor-vitae-while the ground is quite bare on the west- Whence this difference?

A few more hylas peep today though it is not so warm as the $9^{\text {th }}{ }^{\text {- }}$ // These warm \& pleasant days I see very few ducks about though the river is high.

The current of the Assabet is so much swifter-\& its channel so much steeper than that of the main stream-that while a stranger ${ }^{2}$ frequently cannot tell which way the latter flows by his eye-you can perceive the declination of the channel of the latter within a very short distance-even between one side of a tree \& another- You perceive the waters heaped on ${ }^{3}$ the upper side of rocks

[^82]\& trees-\& even twigs that trail in the stream.
Saw a pickerel washed up-with a wound near its tail-dead a week at least- Was it killed by a fish-hawk? the
Its oil when disturbed smoothed ${ }^{\wedge}$ surface
of the water with splendid colors- Thus close
ever is the fair to the foul- The iridescent
oily surface- The same object is ugly or
beautiful according to the angle from which you view it. Here also in the river wreck is the never failing teazle telling of the factory above-\& saw-dust

The teased river! These I do not notice on the S branch.
from the mill. $\wedge\{$.
// I hear of one field plowed \& harrowed. Geo.
Heywood's- Frost out there earlier than last year.
You thread your way amid the
rustling oak leaves on some warm hill
side-sloping to the south-detecting no
growth as yet-unless the flower-buds
of the amelanchier are somewhat expanded
when glancing along the dry stems-in
the midst of all this dryness-you detect
the crimson stigmas of the hazel-like little
stars peeping forth-\& perchance a few
catkins are dangling loosely in the
zephyr \& sprinkling their pollen on the
dry leaves beneath-
You take your way along the edge
of some swamp that has been cleared
at the base of some south hill-side
where there is sufficient light \& air
\& warmth-but the cold northerly winds are
fended off-\& there behold the silvery catkins of the sallows-which have alread crept along their lusty osiers more than an inch in length-till they look like silvery wandsthough some are more rounded like bullets - The lower part of some catkins which have lost their bud scales-emit a tempered crimson blush through their down from the small scales within- The catkins grow longer \& larger as you advance into the warmest localities-till at last you discover one catkin in which the reddish anthers
near the end
are beginning to push from one side $\bar{\Lambda}^{1} \&$ you
know that a little yellow flame will have
burst out there by tomorrow-if the day is fair.
I might said on the $8^{\text {th }}$-Behold that
little hemisphere of green in the black \& sluggish
amid the open alders
brook $\bar{\wedge}^{2}$ sheltered under a russett tussuck- It is the cowslip's forward green- Look narrowly explore the warmest nooks-here are buds larger yet showing more yellow-\& yonder see 2 full blown yellow disks close to the waters edgeMethinks they dip into it when the frosty
nights come. Have not these been mistaken for dandelions?

Or on the $9^{\text {th }}$-This still warm morning paddle your boat into yonder smooth cove
close up under the south edge of that

[^83]${ }^{2}$ Caret written below dash
of that wood which the april flood is
bathing-\& observe the great mulberry like catkins of yonder aspen curving over \& downward
-some already an inch or more in lengthlike great erimson reddish caterpillars covered thickly with down-forced out by heat-\& already loose \& of
the sides \& ends of some are ${ }^{\wedge}$ a pale straw color shedding their pollen- These for their forwardness are indebted to the warmth of their position-

Now for the White-maple the same day
paddle under yonder graceful tree
which marks where is the bank
of the river-though now it stands
in the midst of a flood a quarter
of a mile from land-hold fast
by one of its trailing twigs-for the
stream runs swiftly here- See how
the tree is covered with great globular
clusters of buds- Are there no anthers
nor stigmas to be seen-? Look up-
ward to the sunniest side-steady-when
the boat has ceased its swaying-do
you not see 2 or 3 stamens glisten like spears advanced on the sunny side of a cluster?- Depend on it the bees will
find it out before noon far over the flood as it is.

Seek out some young \& lusty growing
alder (as on the $9^{\text {th }}$ ) with clear shining
\& speckled bark-in the warmest possible
position-perchance where the heat is reflected
from south some bank or hill side \& the water
The scales of the catkins generally are loosened but bathes its foot- ^ On the sunniest cheek of the clump behold one or 2 far more considerably loosened-wholly or partially dangling \& showing their golden insides- Give the most forward of these a chuck \& you will get a few grains of its yellow dust in your hand. Some will be in full bloom above while their extremities are comparatively dead as if struck with a palsey in the winter. Soon will come a rude wind \& shake their pollen copiously over the water. Ap. $12^{\text {th }}$ ' 56

There is still a little snow ice on the N side of our house 2 feet broad-a ${ }^{1}$ relic of the $25^{\text {th }}$ of December- This is all there is on our premises.

Ac. To Rees Cyclopedia the sap of the birches is fermentable in its natural state-also "Ratray, the learned Scot, affirms, that he has found by experiment, that the liquor which may be drawn from the birch tree in the spring time is equal to the whole weight of the tree, branches, roots, \& all together".

I think on the whole that of the particular trees which I tapped-the yellow \& canoe birches flowed the fastest.
Hazy all day with wind from the west-
threatening rain-haze gets to be very thick \& perhaps smoky in the $\underline{\mathrm{P}} \underline{\mathrm{m}}$-conceal-
ing distinct forms of clouds-if there
are any. Can it have anything to
do with fires in woods West \& SW?
yet it is warm.
5 Pm Sail on the meadow- There
suddenly flits before me \& alights on a small apple tree in Mackay's
field as I go to my boat-a splendid
// purple-finch- Its glowing redness is revealed when it lifts its wings-as when the ashes is blown from a coal of fire- Just as the oriole displays its gold.
// The river is going down-\& leaving the
line of its wrack on the meadow-
It was at its height when the snow generally was quite melted here-ie. yesterday.
Rains considerably in the evening.
Perhaps this will raise the river again. No-
Sunday Ap. $13^{\text {th }}$ ' 56
8 Am. Up RR- Cold-\& froze ${ }^{1}$ in the
// night. The Sallow will not open
till some time today.
I hear a bay wing on the RR. fence sing
the rythm-somewhat like- $\{-\}$
or here here fast
char char, che che, chip chip chip,
very fast \& jingling jinglingly
chitter chitter chitter chit, tchea tchea.
It has another strain considerably different but a $2^{\text {nd }}$ also sings the above-2 on different posts are steadily singing the same-as if ${ }^{2}$ contending with each other-notwithstanding the cold wind. Still cold \& windy
The early gooseberry leafbuds-in garden have ${ }^{1}$ //
burst-now like small green frilled horns.- Also the Amelanchier flower buds are bursting.

As I go down the R. R.-causeway-I see a flock
of 8 or 10 bay-wing sparrows' fitting along the fence \& alighting on the apple tree- There are many robins about also- Do they not incline more to fly in flocks a cold \& windy day like this?
\& melted
The snow ice is now all washed ${ }^{\wedge}$ off of //
Walden-down to the dark green clear ice
which appears to be 7 or 8 inches thick \& is
quite hard still- At a little distance
you would mistake it for \{water\}further off still as ${ }^{2}$ from F. H. Hill-it is blue as in summer- You can still get on to it from the southerly side-but elsewhere there is a narrow canal 2 or 3 to 12 feet wide next the shore- It may last 4 or 5 days longer, even if the weather is warm-

As I go by the andromeda ponds I hear the tut tut of a few croaking frogs. // and at Well meadow I hear once or twice a prolonged stertorous sound-as from // river meadows a little later usually-which is undoubtedly made by a dif. frog from the first-

Fair. Haven Pond to my surprise is com- //

[^84]pletely open- It was so entirely frozen over on the $8^{\text {th }}$ ult- that I think the finishing stroke must have been given to it-but by last nights rain. Say then Ap. $13^{\text {th }}$ (?)
Return over the shrub oak plain \& the Cliffs. Still no cowslip-nor saxifrage There were alders out at Well meadow head-as large bushes as any-can they
? be A. serrulata-V. leaves by \& by.
Standing on the Cliffs I see most snow when I look s. w.-indeed scarcely a far or near
particle in any other direction-^ from which \& from other observations-I
infer that there is most snow now under the N. E. sides of the hills-especially in ravines there.
At the entrance to the Boiling spring wood just beyond the Orchard-( ${ }^{1}$ of Haden) the N. E. angle of the wood-there is still a snow
// drift as high as the wall-or $31 / 2$ feet quite
deep-stretching ^ across the road at that height-\& the snow reaches 6 rods down the road. I doubt if there is as much in the road anywhere else in the townIt is quite impassable there still to a horse-as it has been since Decemberall winter.- This is the heel of the winter Scare up 2 turtle doves in the dry stubble in Wheelers ${ }^{2}$ hill field by the RR- I saw two together once before
this year-probably they have paired. Monday Ap. $14^{\text {th }}$ '56
A raw over-cast morning
8 Am. Up Assabet- See one striped squirrel chasing another round \& round the Island-with a faint squeak from time to time-\& a rustling of the dry leaves- They run quite near to the water.

Hear the Flickers cackle on the Old aspen
\& his tapping sounds afar of over the water. Their tapping resounds this far-with this peculiar ring \& distinctness because it is a hollow tree they select-to play on-as a drum or tambour. It is a hollow sound which rings \{ehang\} \& dis-tinct-to a great distance-especially over water.

I still find small turtles eggs on the surface entire-while looking for arrowheads by the Island.
See from my window-a fish-hawk flying high // W of the house-cutting off the bend between Willow Bay \& the meadow in front of the house -between one vernal lake \& another-he suddenly
straightening out his long narrow wings high
wheels \& ^ makes one circle ^ above the last meadow as if he had caught a glimpse of a fish beneath-\& then continues his course down the river.
P. M.

Sail to Hill by Bedford line
Wind S. W. \& pretty strong-sky overcast
weather cool- Start up a fish-hawk
from near the swamp white oaks SW
undoubtedly the one of the morning
of the Island. ${ }^{\wedge}$ I now see that this
is a much darker bird both above \& beneath-than that bird of the $6^{\text {th }}$ ult. It flies quite low, in surveying the water, in an undulating buoyant manner-like a marsh hawk or still more a Night hawk-with its long curved wings. He flies so low westward that I lose sight of him against the dark hill-side \& treesThe river is going down rapidly-yet the Hunts Bridge causeway is but just bareThe S side of Ponkawtasset looks much greener \& more forward than any part of the town I have noticed. It is almost like another season thereThey are already plowing there.

I steer down straight through the Great Meadows-with the wind almost directly aft-feeling it more \& more the farther I advance with them. They make a noble lake now- The boat tossed up by the rolling billows keeps falling again on the waves with a chucking sound which is inspiriting. There go a couple of ducks which probably I have started-now scaling far away on motionless pinions with a straight descent in their low flight toward some new cove- Anon

I scare up 2 black ducks which make one circle around me reconnoitering-\& rising higher \& higher-then go down the river. Is it they that so commonly practice this maneuvre- Peters is now far behindon a forgotten shore- The boat moored beneath his hill is no longer visible-\& the red russet hill which is my goal rises before meI moore my boat to a tree at ${ }^{1}$ the base of this hill- The waves are breaking with as on a sea-beach violence on this shore-^\& here is the first painted tortoise just cast up by them-\& // lying on his back amid the stones-in the most favorable position to display his bright vermillion marks-as the waves still breakover him. He makes no effort to turn himself back-probably being weary contending with the waves- A little further is another-also at the mercy of the waves-which greatly interfere with its staid helplessly
\& measured ways-its head ^ wagging with every billow- Their scales are very clean \& bright now- The only yellow I notice is about the head \& upper part of the tail. The scales of the back are separated or bordered with a narrow greenish yellow band edging. Looking back over the meadow from the top of this hill
I see it regularly watered with foam-
streaks from 5 to 10 feet apartextending quite across it in the direction of the wind- Washed up against
// this shore I see the first dead suckerYou see now adays on every side on the meadow bottom-the miserable carcasses of the musquash stripped of their pelts. I saw one plunge from beneath the monument.

There is much lumber-fencing stuff \&c to be gathered now-by those inclinedI see an elm top at the Battle ground covered-uttering their squeaks \& split whistles-as if they ${ }^{1}$ had not got their voice yet-and a course rasping tchuck or char-not in this case from a crowb. bird.

Again I see the Fish hawk near the old place- He alights on the ground where there is a ridge covered with bushes surrounded by water-but I scare him again-\& he finally goes off N. E flying high.

He had ap. stayed about that place all day fishing.

$$
\text { April } 15^{\text {th }} \text { ' } 56
$$

6 1/2 Am to Hill.
It is warmer \& quite still-somewhat cloudy in the east- The water quite smooth- April smooth watersI hear very distinctly Barrett's saw

[^85]mill at my landing-. The purple finch is singing on the elms about the house together with the robins-whose strain its resem-
bles ending with a loud shrill ringing
chilt chilt chilt chilt- I push across the meadow \& ascend the hill. The white bellied swallows are circling about \& twittering above the apple trees \& walnuts-on the hill-side. Not till I gain the hill-top do I hear the note of the (F. juncorum) huckleberry bird from the plains beyond- Returned again toward my boat I hear the rich-watery note of the martin making haste over the edge // of the flood- A warm morning over smooth water before the wind rises is the time to hear it- Near the water are many recent skunk probings-as if a drove of pigs had passed along // last night-death to many beetles \& grubsFrom amid the willows and alders along the wall there I hear a bird singthus, to make it rapid
$\underline{a}$-chitter chitter chitter chitter chitter chitter -che che che che, with increasing intensity \& rapidity-\& the yellow red-poll hops in // sight-A grackle goes over (with 2 females) \& I hear from him a sound like a watch-man's rattle-but little more musical.
What I think the Alnus serrulata?-all ${ }^{1}$
Is that one at Bristers spring?
shed pollen to-day X -on the edge of Cat- //
\& at Depot brook crossing?
bird meadow- Also grows on the W. edge of Trillium Wood.

Coming up from the river side I see hear the harsh rasping char-r char-r
// of the crow black bird-like a very coasely vibrating metal, \& looking up see 3 flying over-

Some of the early willow catkins have opened in my window- As they open they curve backwards exposing their head to the light.
By 9 Am the wind has risen-the water is ruffled-the sun seems more permanently obscured-\& the character of the

First Salmon \& Shad at Haverhill today
day is changed.
It continues more or less cloudy \& rain-threatening all day.
// Ed. Emerson saw a toad in his garden today-\& coming home from his house
rather
at 11 P. m. a still \& $\wedge$ warm night
I am surprised to hear the first loud clear prolonged
// ^ ring of a toad-when I am near
Charles Davis' house. The same, or another-rings again on a different key- I hear not more than 2-perhaps only one- I had only thought of them as commencing in the warmest part of some day-but it would seem that may first be heard in the night- Or perhaps this one may have piped in the day \& his voice been drowned by day's sounds- Yet I think that
this night is warmer than the day has been- While all the hill side else perhaps is asleep this toad has just awaked
to a new year- It was a rather warm moist night-the moon partially obscured by misty clouds-all the village asleeponly a few lights to be seen in some windows when as I passed along under the warm hill side I heard a clear shrill prolonged ringing note from a toad the first toad of the year-sufficiently countenanced ${ }^{1}$ by its Maker in the night \& the solitude-\& then again I hear it ${ }^{2}$ (before I am out of hearing-i.e.-it is deadened by intervening buildings) on a little higher key. At the same time I hear a part of the hovering note of my first snipe circling over some distant meadow // a mere waif-\& all is still again. -a-lulling the watery meadows- Fanning the air like a spirit over some far meadows' bay.- And now there far vernal sounds there is only the sound of my feet on the mill dam side walks.

Ap 16 '56
I have not seen a tree sparrow, I //
think since December-
5/2 Am. To Pinxter swamp over
hill- A little sunshine at the rising-

I standing by the river see it first reflected
from E. wood's windows-before I can see the sun- Standing there-I hear that same stertorous note of a frog as was heard the $13^{\text {th }}$ ult or two-ap. from quite across all this flood-\& which I have so often observed before-what kind is it? It seems
to come from the edge of the meadow which has been recently left bare- Apparently this low sound can be heard very far over the water- The robins sing with a will now-what a burst of melody-!1 It gurgles out of all conduits now-they are choaked with it- There is such a tide \& rush of song as when a river is straightened between two rocky walls- It seems as if the mornings throat were not large enough to emit all this sound. The robin sings most before 6 o'clock now- I note where some suddenly cease their song-making a quite remarkable vacuum.
As I walk along ${ }^{2}$ the bank of the Assabet
I hear the yeep yeep yeep yeeep
yeep yeep or perhaps peop of
a fish hawk-repeated quite fast \& whistling
but not so shrill ^ as I think I
have heard it-\& directly I see his
his long curved wings undulating over Pinxter swamp-now flooded-.
From the hill top I see bare ground appearing in ridges here \& there in the ${ }^{1}$ Assabet Meadow-
A grass bird-with a sort of spot on its breast sings here here hé, che che che, chit chit chit, t'chip chip chip chip chip-

The latter part especially fast-
The $F$ juncorum says phe phe phe phe ph ph-p p p pppp-pp faster \& faster flies as I advance but is heard distinctly still further off-

A moist misty rain-threatening April //
day-about noon it does mizzle a little.
The robin sings throughout it. It
is rather raw-tooth-achy weather.
Pm round Waldenmedia
The stellaria ^ is abundantly out//
I did not look for it early it was so snowy- It evidently blossomed as soon after the $2^{\text {nd }}$ of April when I may say the began to go off in earnest-as possible.
The Shepherds purse too is well out- // 3 or 4 inches high-\& may have been some days at least-
Cheney's elm shows stamens on the warm //
side pretty numerously.- Prob that at Lee's Cliff a little earlier
Plowing \& planting are now going //
on commonly- As I go down the RRI see 2 or 3 teams in the fields. Frost appears to be out of most soil. I see much
a \{pine\}-warbler ^ less yellow than the last searching about the needles of the p. \& white pine. Its note is some what shorter-a very rapid \& continuous trill or jingle which I remind myself of by-vetter vetter vetter vetter vét-emphasizing the last syllable. Walden is still covered with ice-which still darker green \& more like water than beforeA large tract in the middle is of a darker shade \& particularly like water. Mr Emerson told me yesterday that there was a large tract of water in the middle! This ice trembles like a batter for a rod around whe I throw a stone on to it- One as big as my fist thrown high goes throughIt appears to be 3 or 4 inches thick. It extends quite to the shore on the N side-\& is there met by snow. The needles of the pines still show where they were pressed down by the great burden of snow last winterI see a maple twig eaten off by a rabbit $41 / 4$ feet from
the ground-showing how high the snow was there- Golden Saxifrage X at //
Hubbard's Close- Frogs sit round round
Callitriche pool-where the tin is cast-
We have waste places-pools-\& brooks-
\&c where to cast tin-iron-slag-crockery
No doubt the Romans \& Ninevites had such places
$\& c-$ To what a perfect system this world is reduced-a place for every thing \& everything in its place!

Ap. 17
Was awakened in the night by a thunder //
\& lightning
${ }^{\wedge}$ shower \& hail storm. the old familiar burst
as if it had been rumbling somewhere else ever since I heard it last \& had not lost the knack.
\& rumble ^ I heard a thousand hail stones strike \& bounce on the roof at once-what a clattering- Yet it did not last long, \& the hail took a breathing space once or twice.
I did not know at first but we should
lose our windows the blinds being away at the These sounds lullled me into a deeper slumber than before.
painters. ^ Hail storms are milked out of the first summer like warmth-they belong to lingering cool veins in the air which thus burst \& come down- The thunder too $\{-\}$ sounds like the final \{rending\} \& breaking up. of winter thus precipitous is its edge- The first one is a skirmish between the cool rear guard of winter \& the warm \& earnest van-guard of summer. Winter Advancing summer strikes on the edge of winter which does not drift fast enough away-\& fire is elicited.

Electricity is engendered by the early heats.
I love to hear the voice of the first thunderas of the toad-(though it ${ }^{1}$ returns irregularly like pigeons\{.\}) far away in his moist meadow-where he is warmed to life\& see the flash of his eye-
// Hear a chip bird-high on an elm
( this morning-\& prob. that was one I heard on the $15^{\text {th }}$ ult- You would not be apt to distinguish the note of the earliest
// I still see quite a snow bank from my window on the hill side at the N. E. end of Clam shell-Say a NE-ex posure- This is on the surface-but the snow lies there in still greater quantityin two hollows where sand has been dug though for the meadow-on the hill side $\wedge$ sloping to the SE -where it is quite below the general surface- - We have had scarcely any rain this spring \& the snow has been melting very gradually in the sun.
P. m. Start for Conantum-in boat

I can hide my oars \& sail up there \& come back another day. wind SW- A moist muggy after noon rain threatening- True april weatherafter a particularly warm \& pleasant fore-noon- The meadows are still well covered \& I cut off the bends- The red-wing goes over with his che-e-e che-e-e chatter chatter chatter- On Hubbards great meadow I hear the sound of some fowl perhaps a loon rushing
through the water-Over ${ }^{1}$ by Dennis Hill ${ }^{2}$ \& push for it- Mean while it grows more \& more rain threatening-All 3 the air moist \& muggy-a great ill defined cloud darkening all the west-but I push on till I feel the first drops knowing that the wind will take me back again- Now I hear ducks rise \& know by their hoarse quacking that they are black one-\& see 2 going off as if with one mind along the edge of the wood- Now comes the rain with a rush- In haste I put my boat about raise my sail \& cowering und my umbrella in the stern ${ }^{4}$ with the steering oar in my hand-begin to move home-ward- The rain soon fulls up my sail \& it catches little From under the umbrella I look out on the scene all the ^ wind. ^ The big drops pepper the watery plain-the aequor on every sideit is not a hard dry pattering as on a roof-but a softer liquid pattering-which makes the impression of a double wateriness- You do not observe the drops decending-but where batter \&
they strike-for there they ^ indent the surface deeply else
like buck shot-\& they or ${ }^{\wedge}$ other drops which they creat-rebound or hop up an inch or two \& these last you see-\& also when they fall back broken into small shot \& roll on the surfaceAround each shot mark are countless circling dimples runing into \& breaking one another-

[^86]\& very often a bubble is formed by the force of the shot which floats entire for half a minute- These ${ }^{1}$ big shot are battering the surface every three inches or thicker- I make haste to take down my sail at the bridges-but at the stone arches-forgot my umbrella-which was unavoidably crushed in part- Even in the midst of this rain I am struck by the variegated surface of the waterdifferent portions reflecting the light differently-giving what is called a watered appearance-broad streams of light water stretch away-between streams of as if they were different kinds of water unwilling to mingle
dark-^ though all are equally dimpled by the rain-\& you detect no difference in their condition-As if Nature loved variety for its own sake- - It is a
// true April shower-or rain- I think the first. It rains so easy-has a genius for it -and infinite capacity for-many showers will not exhaust the moisture of April. When I get home \& look out the window I am surprised to see how it has greened ${ }^{2}$ the grass-it springs up erect like a green flame in the ditches on each side the road-where we had not noticed it before. Grass is born- There is a // quite distint tinge ${ }^{3}$ of green on the hill side seen from my window now. I did not look for the very first.

I learn from the papers that an unusual
number of fruit trees have been girdled
by the mice under the deep snow of the
past winter-immense damage has been
done to nurseries \& orchards- I saw where
a prostrate maple in the Great meadows had
been gnawed nearly bare.
Our river was generally breaking up on
the $3^{\text {d }}$ of April-though ${ }^{1}$ some parts were
frozen till the $12^{\text {th }}$
I see by the papers-That the ice had left
Lake St. Peter (St Lawrence) the $12^{\text {th }}$ ult-
? another paper (of the $11^{\text {th }}$ ) has heard that the St. Lawrence was open from Quebec to Three Rivers-or before the Hudson

The ice on Lake Champlain was broken up on the $12^{\text {th }}$

The ice moved do Fair Haven Pond was quite open the $13^{\text {th }}$

The ice moved down the Penobscot \& the river opened
the $15^{\text {th }}$
Lake Ontario was free of ice the $16^{\text {th }}$
The Kenebeck is expected to ${ }^{2}$ open this week
today is Thursday-
There is still ice in Walden (opens $18^{\text {th }}$ )
Ap 18 $8^{\text {th }}$ ' 56
Pm- - to Lee's Cliff by boat.
A strong N. W. wind-the waves were
highest off Hubbard's $2^{\text {nd }}$ Grove-where they had acquired their greatest impetus \& felt the full force of the wind-

Their accumulated volume was less
beyond on ac. of the turn in the river The greatest undulation is at the lee-ward end of the longest broad reach in the direction of the wind. I was steering there diagonally across the black billows my boat inclined so as almost to drink water. Scare up the same 2 black-ducks-(\& twice again) The ${ }^{1}$ under sides of their wings show quite light \& silvery as they rise in the light.
Red maple stamens in some places pro-
// ject considerably-\& it will prob. blossom
to-morrow if it is pleasant. V 23 proxThe farmer neglects his team to watch my
with its round rusty wooly buds \& pale brown ashy
// sail. The slippery elm $\mathrm{X}^{\wedge}$ That pretty
-----twigs
now brown stemmed moss with green oval fruit-Common Saxifrage \& also early sedge-I am surprised to find abundantly out-both-considering their backwardness
$/ / \mathrm{Ap} .2^{\text {nd }}$ Both must have been out some ie 4 or 5 days half way down the face
// of the ledge- Crowfoot ap. 2 or 3 daysAntennaria at end of cliff as you descend// say yesterday X Turritis Stricta X Columbine XXX \& already eaten by beessome with a hole in the side. It is worth the while to go there to smell the catnep. I always bring some home for the cat at this season.
// See those great chocolate puff-balls
burst \& diffusing their dust-on the side of the
hill- At the sandy place where I moored
my boat just this side this ${ }^{1}$ Cliff the selagi-
\& on Conantum shore near
nella apus is abundant- elms 30 or 40 rods below
Bear berry grows by path from river of 7 rods beyon last pine $S$ side-now strongly flower budded.

Observed a large mass of White lily root wooly
with the mud washed up-the ^ steel blue root-with singular knobs for off shoots
\& long large succulent white roots from all sides the leaf buds yellow
\& lightly rolled up on each side-
Small sallow next above tristis 3 feet high //
in path to Walden ${ }^{2} \mathrm{X}$
Walden is open entirely to-day for first //
-owing the the rain of yesterday \& eve
time. ^ I have observed its breaking up
of different years commencing in ' $45-\&$
the av. date has been Ap. $4^{\text {th }}$
This evening I hear the snipes generally \& peeping of hylas from the door. //

A small brown wasp's (?) nest (last years of course) hung to a barberry bush on edge of Lee's Cliff.

Ap. $1{ }^{\text {th }} 56$
Was awakened in the night to a strain
of music dying away-passing travellers singing- My being was so inf expanded \& infinitely \& divinely related for a brief season-that I saw how unexhausted
how almost wholly unimproved was
man's capacity for a divine life.
When I remembered what a narrow \& finite
life I should anon awake to!
Thoug with respect to our channels, our valleys \& the country we are fitted to drain we are Amazons ${ }^{1}$, we ordinarily live with dry channels.
// The Arbor-vitae by river side behind Mon-roes-appears to be just now fairly in blossom.
X I notice acorns sprouted. My birch wine now after a week or more has been pretty clear \& colorless again the brown part having settled \& now coating the glass.
Helped Mr Emerson set out in Sleepy
Holly 2 over-cup Oaks-1 beech ${ }^{2}$ \& 2 Arborvitaes ${ }^{3}$
As dryness will open the pitch pine cone-so moisture closes it up again- I put one which had been open all winter into water and in an 4 hour or 2 it shut up nearly as tight as at first.

$$
\text { Ap. } 20\{t \mathrm{th}\} \text { '56 }
$$

// Rain, Rain, rain5-a N. E. storm
I see that it is raising the river somewhat again. some little islets which had appeared on the meadow just N. W of Dodd's are now fast being submerged again.

[^87]Columella book 1 p 163 (p
15 of the Eng. Trans 1745) says-I quote the trans-"there is a great multitude of Greeks, who lay down rules \& precepts for husbandry; of whom the chief, that most celebrated Poet Hesiod the Boeotian [note of trans says 'Pliny says his book of Husbandry ${ }^{1}$ was lost in his time, \& that he was the first who gave precepts upon that subject?] has contributed not a little to our profession. Afterwards, Democritus the Abderite, Xenophon a follower of Socrates, Architas the Tarentinian, and those 2 Peripatetics ${ }^{2}$, the master and the scholar, Aristotle \& Theophrastus, who all sprung from the fountains of wisdom, gave further assistance to it." ness with no ordinary care, Hieron, and Epicharmus his scholar, [note says 'he wrote carefully of medicines proper for cattle' ac to Columella] Philometor, and Attalus. [note-'Varro . . . seems to say that Philometor was only the surname of Attalus'-] Athens also has produced a great number of writers, of which the most approved authors are Cháereas, Aristandros, Amphilschus, Euphron; Chrestus the son of Euphron, not as many think the Amphipolitan, who himself is also esteemed an excellent husbandman, but he who was a native
of Attica."
ๆ "The Islands also greatly cultivated this study, and had it in great estimation; as witness Epigenes of Rhodes, Agathocles of Scio, Euagon and Anaxipolis of Thasus. Menander \& Diodorus, also, who were of the same country with Bias, one of the seven wise men, laid claim among the first, to the knowledge of Agriculture. Nor did Bacchius and Mnasseas of Milesium, Antigonus of Cyme, Apollonius of Pergamus, Dion of Colophon, Hegesias of Marogna, [notereferred to by Vitruvius 'as having, with infinite study \& care, explained the properties of places, and the virtues of waters?] yield to these. For,
?? indeed, Diophanes the Bithynian, abridged \& reduced into six books the entire works of Dionysius of Utica, who, in many volumes, had, in a very diffuse manner, interpreted Mago $^{1}$ the Carthaginian; and other, notwithstanding more obscure authors, whose countries we have not been informed of, have contributed something to our study.
$\mathrm{n}^{2}$
They are those following: Androtion, Aeschrion, Aristomenes, $\underline{\text { Ãthenagoras, Crates, Dadis, }}$

Dyionysius, Euphyton, Euphorion. [Varro says
of these last that most of their writings were lost in his time] Nor with less fidelity have Lysima chus, \& Cleobulus, Menestratus, Pleutiphanes, Persis, Theophilus, to the utmost of their power, brought in tribute to us."
"And that we may now at length bestow the freedom of the city of Rome upon Husbandry, (for as yet, by these authors, she was only of the Greek nation) let us now make mention of the famous Marcus Cato the Censor, [ac. to Pliny the best husbandman of his age] who taught her first to speak Latin ${ }^{1}$; after him, of the $\underline{2}$ Sasersanas, the father \& son, ['Pliny\{,\} says, that they were the most antient, and the most celebrated husbandmen after Cato'] who instructed her more carefully; and, next, of Scrofa Tremellius ['contemporary with Varro'] who made it eloquent; and of Marcus Terentino, [Varro'Beside his books de re rustica, \& de lingua Latina, which, though incorrect, are still extant,'-wrote many more which are lost.] who exactly polished \& perfected her; and afterwards, of Virgil, who made her also mighty \& powerful in verse. Nor, lastly, let us think it below us, to make mention of Hyginus, who was, as it were, a pedagogue to her. Nevertheless, above all, let us pay the greatest veneration \& respect to Mago the Carthaginian, the
father of Husbandry. ['wrote 28 books on this subject in the Carthaginian language'] For those 28 memorable volumes of his were, by a decree of the Senate, translated into the Latin tongue. Nevertheless, men of our own times, Cornelius Celsus, \& Julius Atticus, have deserved no less commendation. For Cornelius comprised the whole body of this art in five books, and Julius Atticus published one single book, of one species of culture relating to vines; whose disciple, as it were, Julius Graecinus, took care that 2 volumes of the like precepts concerning vineyards, which he had composed in a more facetious \& learned style, should be transmitted to posterity."
Here are 55 writers on Husbandry named.
"But if fortune shall have favored our wishes, we shall have land (agrum) under a salubrious sky, (salubri caelo) with a rich soil, partly champaign, partly hills (collibus) gently sloping to the east or south, with some parts (terrenis) cultivated, \& others woody \& rough, nor far from the sea or a navigable river, by which the fruits can be exported \& commodities (merces) imported. Let the champaign, divided or grass ground
into mowing \& arable (prata et arva) \& willow \& reed yards groves, lie below the house. Let some hills be bare of trees that they may serve for corn alone ${ }^{1}$ (segetibus-or grain crops) which yet thrives better on moderately dry \& flat rich (pinguibus campis) plains than on steep
places- Therefore even the higher corn-lands ought to have some level places, and to be as gently sloping as possible, \& very similar to a champaign position. Then let other hills be clothed with olive-yards, and vineyards, and their future props (-pedamentis); and be able to afford wood (materiam) \& stone, if necessity obliges you to build; nor less pasture (pascua\{)\} for cattle. Then let living waters springing forth (salientes) send down rivulets flowing down (decurrentes) to the grass ground (prata) \& gardens \& willow groves; nor let there be wanting herds \& flocks of cattle \& the other quadrupeds feeding on the cultivated ground and the thickets."

168 Columella says that Cato said that in buying a farm 2 things were chiefly to be considered "the salubrity of the air, and the fertility of the soil".-after these "the road, the water, \& the neighborhood".- - - "To the other precepts we add this, which one of the 7 wise men delivered to posterity for ever, $\{-\}$ $\{\mu \dot{\varepsilon} \tau \rho o v a \rho i \sigma \tau o v\}$, measure is best.-- - -- - -" and he quotes Virgil's Laudato ingentia rura, Exiguum colito- - - - \& also says that "it is worthy of that most acute people the Cathaginians to have said that 'The land (agrum) ought to be weaker than the husbandman'; wrestle
since when he must strive with it, if the farm farmer
prevail the owner ${ }^{1}$ must be crushed." (Quoniam
cum sit colluctandum cum es, si fundus praevaleat, allidi dominum.)

$$
\text { Ap. } 22^{\text {nd }} ' 56
$$

// It has rained 2 days \& nights-\& now the sun breaks out-but the wind is still Easterly-\& the storm probably ${ }^{1}$ is not over- In a few minutes the air is full of mizzling rain again8 Am- Go to my boat op. Bittern Cliff
// Monroe's larches by river will ap shed pollen soon- The staminate flowers look forwardbut the pistillate scarcely show any red-
// There is snow still (of the winter) in the hollows where sand has been dug on the hill side E of Clam shell- Going through Hubbard's root-fence field-see a pigeon woodpecker on a fence post-he shows his lighter back between his wings cassock-like \& like the smaller wood peckers-joins his mate on a tree \& utters the wooing note o-week o-week \&c-

The seringo also sits on a post-with a very distinct yellow line over ${ }^{2}$ the eyerhythm
\& the burden of its strain is Ker chick / Ker che / Ker-char-r-r-r-r / chickthe last 2 bars being the part chiefly heard. The huckleberry 3 buds are much swolen- I see the tracks of some animal which has passed

[^88]perhaps a skunk
over Potter's sand ${ }^{\wedge}-$ they are quite distinct-
the ground being smoothed and softened by rain.
The tracks of all animals are much more
distinct at such a time. By the path \&
in the sandy field beyond are many of those
star-fingered puffballs- I think they must be
those which are so white like pigeon's eggs
leathery
in the fall-the thick ^ rind bursting into 8
like those of a boys batting-ball
to 11 segments ^ \& curving back- They are very pretty \& remarkable now sprinkled over the sand-perhaps more smooth \& plump on ac. of the rain. (I find some beyond at mt sumach Knoll-smaller with a very short thin rind \& more turned back-a diff species plainly.)

The inside of the rind, which is uppermost, approaches a chocolate color-the puff ball is rough
a ^ dirty or brownish white-the dust which does not
not fly now at any rate is chocolate colored.
Seeing these thus open I should know there had been wet weather- V 2 ps forward
The mt sumack berries ${ }^{1}$ have no redness
now-though the smooth sumac berries have-
Its twigs are peculiarly slender \& so have
a small pith-its heartwood is not yellow,
like the smooth \& the dogwood, but green.
Its bark is more gray than that of the smooth-
which last when wet is slightly reddish. Its bark
sap or juice is not yellow like that of the smooth-\& is slower to harden.
Some Hellebore leaves are ${ }^{2}$ opened in the Cliff //
brook swamp My boat is half full of water- There are myriads of snow fleas ${ }^{3}$ on the water now amid the bushes-ap. washed out of
// the bark by the rain \& rise of river-
I push up stream to Lee's Cliff-behind Goodwin who is after musquash- Many suckers
\& one perch have washed up on the Conantum
shore the wind being SEasterly- I do not de-
(It would be worth while to see how long before this happens-)
tect any wound- Their eyes are white ^ \& they
appear to have been dead some time- Their fins
\& they are slimy
are worn-^I cut open a sucker \& it looked
rather yellow within- I also see some-
times their bladders washed up. They float
on their backs. When cut open they sinkdouble
but the ^ bladder is uppermost \& protruded as far as possible. Saw
some pieces of a sucker recently dropped by
some bird or beast 8 or 10 rods from the
shore- Much root \& leaf bud washed
Very perfect \& handsome clamshells recently opened-by the musquash-ie
// up- A gull- I buy a male musk-
during the storm-lie on the meadow \& the hill side just above
rat of Goodwin just killed- He some-
water-mark- They are especially handsome because wet by the
times baits his mink traps with muskratrain.
always with some animal food- The muskquash
does not eat this-though he sometimes treads
on the trap \& is caught- It rains hard
\& steadily again \& I sail before it. Now
I see many more ducks than in all
// that fair weather-shell drakes \&c
A marsh-hawk in the midst of the rain is skimming along the shore of the meadow close to the ground $-\&$ though not more than 30 rods off I repeatedly lose sight
of it-it ${ }^{1}$ is so nearly the color of the hill side
beyond- It is looking for frogs.
The small slate colored hawk which I have called pigeonhawk-darts away from a //
bushy island in the meadow.
The muskrat which I bought for 12 centsweighs 3 lbs 6 oz . Goodwin thought that some would weigh $1 / 2$ to $3 / 4$ of a lb. more I think a lb more
than this. ^ Thought this was a young one of judged by the tail-
last year-^\& that they hardly come to their growth in one year- Extreme length 23 inches-length
of bare tail nine inches-breadth of tail 7/8
of an inch-breadth of body \&c as it lies $61 / 2$
An oval body-dark brown above (black in some lights the coarse wind hairs aft) reddish

Thus far the color of the hair-the fur within slate color brown beneath- ^ tail black-feet a delicate glossy dark slate? with white nails- The hind feet half webbed-\& their sides \& toes fringed thickly with stiff hair ap- to catch water-ears partly
apparently (for the head is wet $\&$ bruised) ${ }^{\wedge}$ concealed in the fur-short \& round-long black mustachial bristles- Forelegs quite short more like hands, hind ones about 3 inches without the line of the body's fur \& hair- Tail on the skin is a little curved downwards.

The star-fungi-as they dried in my chamber in the coarse of 2 or 3 hours-drew in the fingers-the different segments curled back tightly upon the central puff- The
points being strongly curled downward in to the
middle-dimple-wise. It requires
wet weather then to expand \& display them
to advantage- They are hygrometers-
Their coat seems to be composed of 2 thick-
nesses-of different material \& quality-
\& I should guess that the inside choclate
colored had a great affinity for moister
\& being saturated with it swelled \& so
necessarily burst off \& turned back-
-\& perchance the outside dirty white or pale
grown one expands with dryness-
A single male shell-drake rose from
amid the alders against Holden swamp
woods as I was saling down in the rain with outstretched neck-
\& flew ^ at right angles across my course only 4 or 5 rods from me-\& a foot or 2 above the water-finally circling round into my rear-
Soon after I turned about in Fair Haven Pond-it began to rain hard- The wind was but little S of E-\& there fore not very favorable for my voyage. I raised my sail-\& cowering under my umbrealla in the stern-wearing the umbrella like a cap \& holding the handle between my knees I steered \& paddled-almost perfectly sheltered from the heavy rainYet my legs \& arms were a little
exposed sometimes in my endeavors to keep well to windward so as to double certain capes ahead-For the wind occasionally drove me on to the western shore From time to time from under my umbrella I could see the ducks spinning away before me like great bees- For when they are
you
flying low directly from you, ^ see hardly anything but their vanishing dark bodies-while the rapidly moving wings of paddles seen ${ }^{1}$ edgewise are almost invisible. At length, when the river turned more easterly-I was obliged to take down my sail-\& paddle slowly in the face of the rain, for the most part not seeing my course with the brella slanted before me- But though my progress was slow \& laborious-\& at length I began to gett a little wet-I enjoyed the adventure-because it combined to some extent the advantage of being at home in my chamber \& abroad in the storm at the same time.
It is highly important to invent a dress which will enable us to be abroad with impunity in the severest storms- We cannot be fully
said to have ^ invented clothing yet.
In the meanwhile the rain water collects in the boat \& you must sit with you feet curled up on a paddle-\& you expose your-
self in taking down your mast \& raising
it again at the bridges. These rain
storms-(this is the $3^{\text {d }}$ day of one) charac-
terize the season-\& belong rather to winter
than to summer- Flowers delay their blossoming
-birds tarry in their migrations \&c \&c-
It is surprising how so many tender organizations of flowers \& insects survive them uninjured.
The muskrat must do its swimming chiefly with its hind feet- They are similar in form \& position to those of the shelldrake- Its broad oval ${ }^{1}$ \&
flattish body too must help keep it up-
Those star-puff-balls which had closed up
in my chamber put into water opened again in a few hours.
What is that little bodkin shaped bulb which
I found washed up on the edge of the meadow Ludwigia palustris


White with a few small greenish rounded leafets?
a fac simile.
On the $19^{\text {th }}$ ult when setting out one of those over-cup oaks in sleepy Hollow-digging at the decayed stump of an apple tree we disturbed-
? dug up-a toad which prob. had buried itself there last fall \& had not yet come out.

Columella-De positione villae-p 172
tells us-that that the villa was
divided in to 3 parts the urban-rustic-\& fructuary (fructuaria)the first for the $1^{\text {st }}$ for the Paterfamiliae \& his family- $2^{\text {d }}$ rustic for

This whole chapter is important-De positione \&c

[^89]the laborers hired \& free slaves \& for the cattle \&c-the $3^{\text {d }}$ for th barns cellars \&c for fruits-of all kinds-hay-wine \& oil presses \& ellans \&c- The baliff (or villicus) was to have his habitation close by the gate of the villa, that he might have a view of those going in \& coming-out, \& the Procurator (steward? says Trans) over the gate for the same purpose. Says it is important that the dung hills be kept moist \& strong enough to kill the seeds of thorns \& grasses conveyed to it in litter \& chaff-nec in agrum exportata [i.e. semina) segetes herbidas reddant.-nor carried in to the field produce weedy crops.
$180 \quad$ "For a herdsman (bubulco) a natural aptitude of mind (indoles mentis) though necessary is not enough, ${ }^{1}$ unless a great volume of voice (vastitas vocis) and constitution (habitus) make him to be feared by the cattle. But let clemency temper his strength; for he ought to be more terrible than cruel, so that the cattle may both obey his com-mands-, \& not worne out by the vexation of labor \& blows at the same time, last longer (diutius perennent)." Advises to make the tallest slaves plough-men-both for the above reasons \& because the tall are not so little fatigued by any labor, not having to stoop to it- - - "Vineyards demand not so much tall, as

[^90]broad \& brawny? (lacertosos) men," army, or perhaps
with long \& strong arms.
Columella thus describes well enough
the condition of much of our exhausted Concord soil-especially-old rye-fields-which have been cultivated many years in succession They are not weary with labor-but
without manure- exhausted for want of nourishment.
At cum perruptae rastris et aratris radices herbarum, ferroque succisa nemora frondibus suis desierunt alere matrem, quaeque temporibus autumni frutetis et arboribus delapsa folia superjaciebantur, mox conversa vomeribus, et inferiori solo, quod plerunque est exilius, permista, atque absumpta sunt, sequitur, ut destituta pristinis alimentis macrescat humus."
But when the roots of plants being broken through with rakes (or hoes?) \& ploughs, and the forests cut down with the axe, have ceased to nourish their mother with their leaves, and whatever leaves falling from the shrubs \& trees in autumn were cast upon her were presently turned in with plow-shares, and mixed with the \{lower\} sub-soil, which for the most part is the leaner, and were $\{$ eommon $\}$ wasted, it follows that the soil earth destitute of its pristine nourishment, grows lean."
183 "Those most skilled in rustic affairs say that there are 3 kinds of land (or soil?) ${ }^{1}$ terreni): Campestre, collinum, montanum- Champaign, hilly, \& mountainous."

Speaking of clearing wild land p 184
Let Incultum igitur locum consideremus, siccus an humidus; nemorosus arboribus, an lapidibus confragosus; juncone sit, an gramine vestitus, ac filictis alliisve frutetis impeditus; si\$ humidus erit, abundantia uliginis ante siccetur fossis. Earum duo genera cognovimus, caecarum et patentium;-"

Let us therefore consider an uncultivated place, whether it is dry or moist; woody with trees, or rugged with stones; clothed with rushes or with grass, and encumbered with fern groves or shrubby
other ${ }^{\wedge}$ nurseries. If it is moist let the abun-
drained
dance of moisture be first dried up by ditches. We have known 2 kinds of these, blind \& open;-" This reminds me of many a wild Concord pasture-\& so of the following At saxosum facile est expidire lectione padidum, quorum si magna est abundantia, velut quibusdum substructionibus partes agri sunt occupandae, ut reliquae emundentur; vel in altitudinem sulco depresso lapides obruendi. But it is easy to clear stony ground by picking up the stones. if there is a great abundance of them parts of the field are to be occupied as it were by certain piles built up, that the rest may be clear; or the stones are to be buried in a But this (ap-both) is to
furrow sunk very deep." be done only when labor is very cheap-si suadebit operarum vilitas-
When stones \& gravel are wanting
a blind ditch is to be filled with "a rope of sprays tied together" (Trans) and cypress
184 or pine boughs or others trodden upon $\mathrm{it}^{1}-$ \& then covered with earth. (Sarmentis connexus velut
funis informabitur)

$$
\text { Ap } 23^{\mathrm{d}} \mathrm{~F} 5
$$

To-White Cedars.
Pm up Assabet- The river risen
// again on ac. of the rain of the last 3 days to nearly as high as on the $11^{\text {th }}$ ultI can just get over Hosmer's meadow-
// The red maple did not shed pollen on the $19^{\text {th }} \&$ could not on the $20^{\text {th }}-21^{\text {st }}-$ or $22^{\text {nd }}$ on ac. of rain so this must be the first day-the $23^{d} \mathrm{X}^{2}$-though I see none quite so forward by the river- The wind is now westerly-\& pretty strong- No sap to be
// seen in the bass- The White birch sap flows
yet from a stump cut last fall-\& a few small bees-flies \&c are attracted by it.

Along the shore by Dove Rock I hear like a fox-col- sparrow-
a faint tseep ^ \& looking sharp detect
// upon a maple a White-throated sparrow. I soon flies to the ground amid the birches 2 or 3 rods distant- ${ }^{3}$ plump looking bright
bird \& with its ^ white \& yellow marks on the head-distinctly separated from the slate-color-methinks the most brilliant of the sparrows- Those bright colors however are not commonly observedThe white cedar swamp consists of humocks-now surrounded by water-
V. n 21

[^91]notice bird's nests
Stop

Andrews Lat. Dict.
Adoreum (from ador) relating to spelt
Faba-more properly perhaps our hog's bean or horse-bean
Phasolus A kind of bean with an edible pod, French beans, Kidney beans, phasel;-
Cicer The chick-pea
Cicera pulse similar to the chickpea, chickling vetch
Panicum Italian panic grass
Ptisana Barley washed \& cleaned from the hulls, barley groats, pearl-barley, (also) a drink made from barley groats, barley-water, ptisan.
Medica an excelleent kind of clover introduced from Media, Burgundy clover, lucern
Ervum a kind of pulse, the bitter vetch
Farrago Mixed fodder for cattle, mash.
Far, a sort of grain, spelt, Gr. $\xi \dot{\varepsilon} \alpha$, Triticum spelta L. The earliest food of the Romans, both roasted \& ground into meal.
Avena oats 2 kinds common \& wild
V. Smiths' Class. Dict.

I find a jugerum to be about 99 rods

Observe snail furrows in brooks in winter
if there are any V March 20
Note of grackles \& how early
Bay-wing how early-
When turpentine of wht pine bark beg to flow-before Ap. 10
Is that an A. serrulata at Brister's spring? no?
Observe if latent leaves of S . borealis are often reduced to \{bracts $\}$ \& compare with S. longifolia
Is that a V. fuseatum with string 1 rod E of $\{$ bend $\}$ at Clam Shell has reddish young leaves Yes
Is that P. Erythrocarpum with string 2 feet W of swamp \& \{1 rd\} W
so N of entrance to Hub swamp?
V Chewinks nest of June $1^{\text {st1 }}$
V Choke berry by E Walden sand -\& N end Emerson Cliff $\{-\}$
$\{-\}+$ both $\{$ one block away $\}$ 23 ${ }^{\text {¹ }}$
(of June 5
V. Chicadee nest of June $3^{\text {\& }}$ \& Cuekoe \& thrushes
V. King bird nest by stone heap

Yellow-browed sparrow \{Nut Oak\} meadow
V. chewink nest Linnaea \{bot of rd\} $N$ of path $N$ of pine

June 10 bet 2 \{broken $\}$ top young white oaks
V. Paint. turtle eggs \{1 rod+\} S marlbore \{pend\}
(of June 10) \& about 2 feet from edgs of sand
V. small pewee? nest of June 12 Conantum

Get a Downy peekers nest
Asclepias pods up RR 2 kinds of July $5^{\text {th }}$

## Appendix: Images of MS pages

The images that follow show two kinds of features in the MS that can't be adequately represented in the transcript.

## Newspaper clippings attached to pages.

| Transcript page no. | Appendix page no. <br> (lower left corner) |
| :--- | :--- |
| Title of clipping |  |


| $144-145$ | $284-285$ | "City Matters. / Meteorological." |
| :--- | :--- | :--- |
| $146-147$ | $286-287$ | "Effects of the Cold Weather." |
| 154 | 288 | "Ice." |
| $207-208$ | $290-291$ | "Snow Storms the Past Winter." |
| $243-244$ | $292-293$ | "Fishy" |

## Thoreau's measurements of snow depth.

Thoreau's experience with and observations of snow make up a major part of this MS volume; after he completed it he titled it, "The Long Snowy Winter." In addition to many descriptive passages, the volume contains a series of calculations Thoreau made in order to determine how much snow had fallen in J anuary, February, and March.

His interest in measuring snow had surfaced in the J ournal two years earlier, when a massive storm that began December 29, 1854, paralyzed Concord. Thoreau was intrigued by the wide variance in "the usual estimates of the depth of snow" dropped by this storm. He wrote in a J anuary 2, 1854, J ournal entry, "I have heard different men set this snow at 6-15-18-24-36- \& 48 inches," and he spent that day gathering evidence for an empirically-based judgment. He walked a line more than a quarter of a mile long through a pitch pine wood and across an open field, measuring and recording the snow depth every ten paces. He made 65 measurements, added them, divided his total by that number, and found the average depth to be 19 inches. He was not satisfied with his conclusion, however, because he thought his sample size was too small: he wrote, "I think that one would have to pace a mile on a N \& Sline up \& down hill- through woods \& fields- to get a quite reliable result" (J ournal 7: 18531854, ed. Nancy Craig Simmons and Ron Thomas [Princeton UP, 2009], p. 222).

The winter of 1856 offered Thoreau an opportunity to repeat his investigation with more observations of snow depth. On ten days, from J anuary until April 1856, he carried out his experiment again and recorded the measurements in his J ournal. Some of these tables are brief and easily represented in type: see pp. $113,119,142$, and 154. In other cases the transcription process isn't flexible enough to represent accurately the spatial relationships among all the features of the tables. In those cases, the following images are presented here as a supplement to the transcripts.

| Transcript page no. <br> (upper left corner) | Appendix page no. <br> (lower left corner) |
| :--- | :--- |$\quad$ Date


| 28 | 277 | J anuary 12 |
| :--- | :--- | :--- |
| 29 | 278 | J anuary 12 |
| 34 | 279 | J anuary 16 |
| 35 | 280 | J anuary 16 |
| 60 | 281 | J anuary 23 |
| 78 | 282 | J anuary 29 |
| 82 | 283 | April 1 |

See transcript, p. 28.


Seetranscript, p. 29.
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See transcript, p. 34.
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See transcript, p. 82.


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283





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II.

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 Bar. $19^{11}$
Rn. 70 Walden-
Ice. The Messes. McFarland had a r-
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[^0]:    ${ }^{1 " 15 " ~ a l t e r e d ~ f r o m ~ " 16 " ~}$
    2"thinking" altered from "I"

[^1]:    ${ }^{1}$ This is a minus sign
    2"where" possibly written over "were"

[^2]:    1"com" written over "with"
    ${ }^{2}$ "earth-star" is a fungus or toadstool that opens into a star shape around the center

[^3]:    1"S" written over "s"
    ${ }^{2}$ Carat written below dash

[^4]:    ${ }^{1}$ "had" possibly altered from "has"
    2"(?)" written above dash
    3"," poss ";" or "-"

[^5]:    ${ }^{1}$ This is a minus sign
    ${ }^{2}$ This is a minus sign
    3"milk" altered from "milks"

[^6]:    ${ }^{1}$ Possibly altered from "her"
    2"the jaws, the jowls, the face" (OED on line)
    3Possibly "at" or possibly altered from "at" 4 " H " written over "h"

[^7]:    1" 3 " written over "2"

[^8]:    1"it" altered from "is"
    ${ }^{2}$ poss "snow-ice"
    3Possibly "\& in"
    4Paren written over dash

[^9]:    ${ }^{1}$ This is a minus sign
    ${ }^{2}$ This is a minus sign
    ${ }^{3}$ This is a minus sign
    4"3" poss written over "P" or unfinished "2"
    5 " 4 " altered from " 3 "
    ${ }^{6}$ This is a minus sign

[^10]:    ${ }^{1 " 18 " ~ c a n c e l l e d ~ i n ~ p e n c i l ~}$
    ${ }^{2}$ blotch after word
    $3 "(?)$ " possibly inserted

[^11]:    ${ }^{1}$ This is a minus sign
    ${ }^{2}$ This is a minus sign
    3"W" written over "I" or "In"
    4 "it" altered from "if"

[^12]:    1"there" altered from "they"
    2"but" altered from "few"

[^13]:    1"hang" altered from "hand"

[^14]:    1"a" altered from "-"
    2"his" altered from "in"

[^15]:    ${ }^{1}$ Exclamation mark written above and below dash
    ${ }^{2}$ This is a minus sign

[^16]:    ${ }^{1} \mathrm{~T}$ squeezed in "ap. tree" beside "6"
    ${ }^{2}$ In the space below "say 10 i.e. 12 ", T wrote the following two lines vertically in pencil: or $91 / 2+W$ of RR
    \& $101 / 2+$ E" "
    3For an image of this MS page, see Appendix, p. 277.

[^17]:    1" 3 " written over "2"

[^18]:    ${ }^{1}$ "or perhaps" possibly in pencil (need better copy)
    ${ }^{2}$ For an image of this MS page, see Appendix, p. 279.

[^19]:    1"on" written over"?"
    ${ }^{2}$ For an image of this MS page, see Appendix, p. 280.

[^20]:    ${ }^{1}$ note from Lorna Mack: This may be the elm T replaced with the existing elm in front of the Art Assoc. (Legend has it)

[^21]:    1"Actaea rubra" cancelled in pencil
    ${ }^{2}$ "W" possibly cancelled in pencil
    ${ }^{3}$ "Alopecurus pratensis" cancelled in pencil
    4 "Ledum latifolium" cancelled in pencil
    5 "Sagina procumbens" cancelled in pencil
    6"O" possibly written over "o"

[^22]:    1"the" possibly altered from "he"

[^23]:    1"!" altered from "-"
    2"2 weeks" altered from "a week"

[^24]:    1"left" possibly altered from "cast"

[^25]:    1"(?)" possibly inserted

[^26]:    1"block" altered from "black"
    2"wood" possibly added to "button"
    3"At" possibly altered from "at"
    4 " 27 " possibly altered from " 17 "
    $5 " \mathrm{as}$ " altered from "I"

[^27]:    ${ }^{1}$ Dash is possibly underlining for "have"
    2"t" interlined above " t " in "crotch" on the line, perhaps for clarification 3"from" possibly altered from "out"

[^28]:    1"the" possibly written over "these"
    ${ }^{2}$ T's caption reads "cones big as filberts"
    3 T's caption reads "cones full grown eaten by squirrels"

[^29]:    1"alone" altered from "along" in pencil
    2"to" altered from "-"
    " A " written over "a"
    4"looked" possibly altered from "\& so"
    5"wood;" altered from "wood-"
    6"passed" altered from "past"

[^30]:    ${ }^{1}$ Caret written below dash
    ${ }^{2}$ Check MS for this word to see what's interlined: is it "ge" or "ges"? EM says "ges". If "ges", decide whether the character in ink preceding " t " is an " s " or a flourish (BW 1/15/07)
    ${ }^{3}$ T first wrote "barbary"; he then wrote "erry" over "ry" but did not cancel "a" of "ary"
    4 "more than" cancelled in pencil (need better image to confirm that "nearly" is in ink and cancel line is in pencil)

    5 "W" written over "w"

[^31]:    1"had"altered from "\&"
    ${ }^{2}$ Illegible word in pencil above "the" (need better image)
    3"of" possibly altered from "on"
    4Check marks across "t" of "though" to confirm open paren is not cancelled (need better image)
    5 For an image of this MS page, see Appendix, p. 281.

[^32]:    1"a" altered from "an"
    2"statement" altered from "statement,"

[^33]:    1"from" possibly altered from "or"
    2 " $R$ " written over " r "
    3"V" possibly written over "v"
    4"largest" possibly altered from "Largest"

[^34]:    "Davis" altered from "davis"
    2 " 2 " possibly altered from " 1 "
    3"Merricks" altered from "merricks"
    4"has" possibly altered from "was"
    5"not" possibly altered from "that"

[^35]:    "of" possibly altered from "on"
    2"against" possibly altered from "in"

[^36]:    ${ }^{1}$ "For every inch" cancelled in pencil
    2"toward" cancelled in pencil
    3"s" added to "trunk"
    ${ }^{4}$ Altered from "appropriated"
    ${ }^{5}$ This is a minus sign

[^37]:    1"Lovewell's Fight" altered from "lovewell's fight"
    2"6" possibly altered from " 5 "

[^38]:    ${ }^{1 " i t " ~ w r i t t e n ~ o v e r ~ " t h i s " ~}$
    ${ }^{2}$ Paren written over dash
    3"the" altered from "one"
    4 "R" altered from "r"
    5"B" written over "to"
    6"S" altered from "s"
    7 "it" altered from "is"

[^39]:    1"on" written over other characters

[^40]:    ${ }^{1 " 13} 3 / 4$ " cancelled in pencil
    2" 12 " cancelled in pencil
    $3 " 14$ " cancelled in pencil
    $4 " 13^{1 / 4+}$ " may be cancelled in pencil; need better image
    5 " 17 " cancelled in pencil
    ${ }^{6}$ For an image of this MS page, see Appendix, p. 282.

[^41]:    1"(?)" possibly inserted

[^42]:    1"possible" altered from "possibly"

[^43]:    ${ }^{1}$ See image, Appendix, p. 283, for vertical row of dots between horizontal lines marked"A" through "D" that can't be reproduced in transcript.

    2"about" cancelled in pencil

[^44]:    1"but" written over "by"

[^45]:    1"from" altered from "\&" (need better image to confirm this AL, which bears on reading "NW \&" as added)
    2"\&" possibly written over "S"

[^46]:    ${ }^{1}$ "Looking" altered from "looking"
    2"but" altered from "as"

[^47]:    "Sheldon" altered from "sheldon"
    2"1675" may be cancelled in pencil; "1704" may be written in pencil
    3 "very little" cancelled in pencil
    4"before . . . foot" cancelled in pencil

[^48]:    1"I" written over "i"
    ${ }^{2}$ Caret written below dash

[^49]:    1"these" written over "they"
    2"E" written over "e"

[^50]:    1"Pm . . . River" poss. added

[^51]:    ${ }^{1}$ Paren written over dash or stray mark

[^52]:    ${ }^{1 " 10 " ~ c a n c e l l e d ~ i n ~ p e n c i l ~}$
    2"from" altered from "\&"

[^53]:    ${ }^{1}$ This is a minus sign
    ${ }^{2}$ This is a minus sign

[^54]:    1"their" poss written over "I p"
    2" 3 " written over "4"
    $3 " 4$ " written over "5"

[^55]:    1"Wood" altered from "wood"
    2"there" possibly altered from "it"
    3"till" possibly altered from "this"
    4 "6" altered from "5"
    ${ }^{5}$ This is a minus sign
    ${ }^{6}$ This is a minus sign

[^56]:    1"nor" poss altered from "wood"

[^57]:    1"\&" altered from "so"
    ${ }^{2}$ newspaper clipping, "Effects of the Cold Weather.", waxed on page in margin beside "Only"; T added vertically in left margin of clipping, in pencil, "Daily Evening Traveller / Boston Mar. $10^{\text {th }} 56$." For images of the clipping in place, see Appendix, pp. 286-287.

    3"that" altered from "than"

[^58]:    ${ }^{1}$ "pond." possibly altered from "pond-"
    ²possibly "fishes!"
    3"Merricks" altered from "merricks"

[^59]:    1"known" possibly altered from "seen"
    ${ }^{2}$ "rods" altered from "roads"
    3Paren written over dash

[^60]:    1"Pinxter" altered from "pinxter"
    ${ }^{2}$ marks, possibly from copying a creased page, on upper right corner of pp. 407 and 409 and on upper left corner of pp. 408 and 410

    3"Anthony" possibly altered from "anthony"
    4"the" written over "I"

[^61]:    1"cold" altered from ")"
    2"It" possibly altered from "the" or other letters
    3 "suggesting" poss written over "the"
    4"nearly" possibly altered from "all"

[^62]:    1"selves" altered from "self"
    ${ }^{2} \mathrm{~T}$ attached a newspaper clipping, "Ice.", to the right of the date and location lines. The clipping is folded, concealing a portion of each printed line. Visible lines read, "The Messers. McFarland had a \{fold\} r- / ice, 11 inches thick, which was the fifth \{fold\} e / the various thicknesses taken from th \{fold\} ne / part of the river amounting to 57 \{fold\} n / [Lowell Courier, 18th." Following "18th." T wrote "\{March \}" in pencil. For an image of the clipping in place, see Appendix, p. 288.

    3"16" written over " 15 "

[^63]:    1"concealing" altered from "concealed" 2"bleeds" possibly altered from "on"

    3Possibly "befel" (that is, possibly underlined)
    4"The" altered from "the"

[^64]:    "At" altered from "In"
    2"Walden" altered from "walden"

[^65]:    1"s" added to "about"
    2"alders" altered from "elders" (or "a" possibly written over "w"?); need better copy
    3 "x" functions to connect "smooth-" to text written vertically in left margin. See next note.
    4"x Another . . . white." written vertically in left margin

[^66]:    1"drift ... snow" underlined in pencil
    2"The" altered from "They"
    3 "d" added to "ice" in pencil

[^67]:    ${ }^{1}$ Possibly "proprietor"; or possibly "proposition" altered from "proprietor" or vice versa
    2"sugar" altered from "it"
    3Possibly altered from "droped"

[^68]:    1"willow" altered from "willows"

[^69]:    ""about" possibly altered from "at"

[^70]:    1"houses" altered from "There" as part of the change that included the addition of "The musk rat"
    2"Monday" possibly added
    3"start to" written above dash
    4"one" poss. inserted
    5Possibly "aspen-buds" or possibly "aspen-bud" altered from "aspen-buds"

[^71]:    ${ }^{1}$ "expand" possibly altered from "on"
    ${ }^{2}$ "lose" altered from "leave"
    3"you" cancelled in pencil

[^72]:    ${ }^{1 " a}$ small" altered from "an a"

[^73]:    1"been" possibly altered from "is"
    2"\&...always" cancelled in pencil
    3 "cold" possibly added in margin
    4"be" altered from "by"
    5Pencilled caret written below dash
    6"many" altered from "my"

[^74]:    " "\&" touching or written over dash, possibly cancelling it
    2"have" altered from "has"
    3 "the" altered from "if"
    4Pencil line through "begins" (need better copy)

[^75]:    1"noticed" altered from "saw"
    2"Hear" altered from "Do"
    3"rivers" poss. "river"
    4Pencil line through "or"
    5 "Assabet" altered from "assabet"

[^76]:    1"Grove" altered from "grove"

[^77]:    ${ }^{1}$ newspaper clipping, "Snow Storms the Past Winter.", dated "Boston, April $7^{\text {th }}, 1856$. ", waxed on page in margin beside "white". For images of the clipping in place, see Appendix, pp. 290-291.
    ${ }^{2}$ "Lord" altered from "lord"

[^78]:    1"were" altered from "was"
    2"Nuthatch" possibly altered from "nuthatch"
    3"forth" altered from "for"

[^79]:    1"this" altered from "the"
    ${ }^{2}$ poss pencil line through "higher"
    $3 " \mathrm{~W}$ " possibly altered from " w " (or reformed)

[^80]:    1"He" possibly altered from "His"
    2"taste" possibly altered from "haste"
    3"Great" altered from "great"

[^81]:    1"one" altered from "a"

[^82]:    ${ }^{1}$ "They" possibly altered from "These" 2"stranger" altered from "strange \{f\}" 3 "on" altered from "one"

[^83]:    ${ }^{1}$ Caret written below dash

[^84]:    ${ }^{1}$ "have" altered from "has"
    2"as" written over "is"

[^85]:    1"they" altered from "their"

[^86]:    1"Over" altered from "\&"
    2"Dennis Hill" altered from "dennis hill"
    3"All" possibly altered from "all"
    4"stern" altered from "steering"

[^87]:    1"Amazons" altered from "amazons"
    2"beech" possibly altered from "beach"
    3"vitaes" altered from "vitae-"
    4 "an" altered from "the"
    ${ }^{5}$ Pencil line through "rain" (need better copy)

[^88]:    ""probably" altered from "is"
    ${ }^{2}$ "over" possibly altered from "of"
    ${ }_{3}$ Pencil line through word (need better copy)

[^89]:    1"oval" altered from "\&"

[^90]:    1"enough," possibly altered from "enough-"

[^91]:    1"it" altered from "at" or "is"
    2"X" possibly inserted
    3"a" altered from "\&"

