

43½ Langdon St.,
Cambridge, Mass., Jan. 10, 1892.

Dear Mr. Briggs:

I was very much pleased with the Mt Katahdin plants, and Dr. Robinson wishes me to thank you for the specimen of Lycopodium alpinum for the Gray Herbarium.

I have got out the plants you requested and shall send them to you by Harriet as she returns in a few days to Orono.

I certainly hope you may have the success which should be expected on your trip next Summer. I have not yet definitely decided where I shall do my active field work in the summer but probably somewhere in the northern part of Maine. I have several enthusiastic correspondents in various parts of the state and we are all

planning to do more than ever next
year.

Among the many interesting things I
have seen this year from Maine, is
one which Miss Furbish collected
at Fort Fairfield twelve years ago.

It proves to be Myriophyllum alterniflorum, DC.
(See Morong. in Torr. Bull. Aug. 1891.)

Thinking they may be of some interest
to you I have made a list of the more
important Katahdin plants which I have
in my records. I have given the
collectors so far as I know them, but in
case of common species only the earlier
collectors.

I hope you will remember me again
in collecting next year. I will you -

Very truly yours

Merritt Lyndon Fernald.

MA Ktaadu Notes.

Clethra verticillaris, DC.

E. Br. of Penob. near Ktaadu (Scribner.)

Nephae calumianum, Ait. E. Br. of Penob. (Young)

Cardamine bellidifolia, L. Chickering, Scribner.

Arenaria triflorica All.

Senecio macrophyllum, Willd. Port Cat. 1st Ed.

Potentilla fruticosa, L. J. A. Bailey &c. &c.

" tridentata, Ait. All.

Aurelanchia oligocarpa, Young. Hale.

Saxifraga stellata, v. comosa, Blake, Scribner.

Hippuris vulgaris, L. E. Br. of Penob. (Goodale)

Epilobium Hornemannii, Reich. Goodale Scribner. Biggs

Ternstroemium pauciflorum, Pylae.

Banks of the Wassataquoque (Thurber)

Eupatorium aperatoides, L.

E. Br. of Pen. opp. "Hunts" (Thurber)

Solidago macrophylla, Pursh. Scribner.

" virga-aurea, v. alpina Bailey, Young &c. &c.

" humilis, Pursh. Blake ?

Erigeron lysopterygioides, Mx

E. Br. of Penob. (Scribner)

Geophalum serotinum, Vill. Scribner, Biggs

- Petasites palmata, Gray. Scribner.
Arnica Chamissonis, Less. Goodale. " Biggs.
Pleurotheca serpentaria v. novae. Scribner, Biggs.
 " Boottii, Gray. " "
Vaccinium Penn. v. angustifolium Scribner.
 " caespitosum, Mx. Thunber. etc. etc.
 " uliginosum, L. " " "
 " Vitis-Idaea, L. " " "
Actinostaphylos alpina Spr. Young. C. E. Smith, etc. etc.
Cassiope hypnoides, Don. " " " "
Bryanthus taxifolius, Gray. Thunber. Blake, etc. etc.
Rhododendron Laponicum, Wahl. " Young etc. etc.
Loiseleuria procumbens, Drew. Scribner etc. etc.
Moneses fraudiflora, Salisb. Thunber. etc.
Pycnola minor L. Goodale.
Diapensia Laponica, L. Young, etc. etc.
Halenia deflexa, Gussb. Young. etc.
Cassipoula pallida v. septentrionalis. Biggs.
Polygonum viviparum, L. Scribner.
Betula papyrifera, v. minor. "
 " fraudulosa, Mx. Young etc. etc.
Salix arypocarpa, Aud. Blake. Scribner.

- Salix Uva-ursi, Tuck. Blake, &c &c.
 " herbacea, L. " Scribner.
Empetrum nigrum, L. all.
~~Pinus Banksiana, Lamb. E. B. of Ten. (Miss Haines)~~
Listera cordata, R. Br. Scribner. Biggs.
 " Convallarioides, Nutt. Chickering.
Habenaria obtusata, Rich. Young.
Juncus trifidus, L. Blake Scribner. Biggs.
Luzula spadicea, v. melencarpa. All.
 " arcuata, Meyen. Goodale.
 " spicata, Desv. Blake, Scribner.
Scirpus caespitosus, L. Thunberg &c &c.
Eriophorum alpinum, L. ? Biggs.
~~Carex miliaris, a. amea, Bailey. Scribner (?)~~
 " rigida, v. Bischoffii, Fuct. all.
 " lenticularis, Mx. Scribner.
 " torta, Boott, Port. Cat. 1st Ed.
 " rariflora, Smith. Goodale.
 " scirpoides, Mx. Blake, Scribner. Biggs.
 " caulescens, v. alpicola. Scribner. Biggs.
 " atrata, v. ovata, Boott. Biggs.
Hierochloa alpina, R. & S. Young. Scribner.
Phlema alpinum, R. ? Biggs.

Agrostis rupestris All. }
canina, v. alpina } Young. Briggs.

Deschampsia flexuosa. Trin. All.

Poa laxa. Haenke. Young. Scribner.

Agropyrum violaceum. Ripp. Briggs.

Adiantum pedatum. L. ~~Briggs.~~

Aspidium aculeatum, v. Braunii. Goodale.

Lycopodium Selago. L. Young. Scribner. Briggs.

" arusticum, v. Jungmans, " etc etc, etc.

" alpinum, L. Briggs.

Merritt Lyndon Fernald.

Cambridge.

Jan. 10, 1892.

PHILLIPS ACADEMY
ANDOVER, MASSACHUSETTS

DEPARTMENT OF AMERICAN ARCHAEOLOGY
WARREN K. MOOREHEAD, DIRECTOR
DOUGLAS S. BYERS, ASSISTANT DIRECTOR

October 15, 1936

Dr. M. L. Fernald
Gray Herbarium
Cambridge, Mass.

Dear Dr. Fernald:

I have found some more lists of flora of Mt. Katahdin among the papers of Mr. Fred. P. Briggs. These may or may not be of some use. I am glad that the others were of some value. I always hesitate to throw anything away that is outside my field, as I never know whether I am throwing away something that might be of some value to other workers.

Sincerely,

Douglas S. Byers

Douglas S. Byers

enc.
DSB/EW

Oct. 17, 1936

THE NEW ENGLAND BOTANICAL CLUB

gift of

Phillips Andover Academy

Lichens collected on Mt. Katahdin, Me.

^{Cetraria, Fahlunensis, Schaer.}
Cetraria juniperina, Ach. (on spruce)

" Islandica, Ach.

" cuculata

Parmelia stygia, Ach

" centrifuga, Ach

" ~~tendrata~~,

Stereocaulon corallinum, Fr.

Cladonia gracilis, Fr., var. verticillata Fr.

" ^{tamaurocraea} Schaer.

" squamosa,

" furcata, Floerk. var. subulata, Floerk

" rangiferina Hoff

" " var. alpestris, Floerk.

" cornucopios, Fr.

Umbilicaria proboscidea, De.

" hyperborea, Hoff.

" erosa, Hoff.

Secida sanguinaria, Ach. (on bark of tree)

" contigua, Fr. (on granite)

^{moss,}
Pogonatum alpinum Raeb.

KTAADN.

Orthography.

Following are the different ways I have found the name of this mountain in print" *Kataadn, Ktahdn, Kataaden,* Ktaadn, Ktardn,₁ Ktaden,₁ Ktahdn,₁ and Katahdin. The first and last are more common than the others, at present. I have taken considerable pains to find out which is the better method of spelling, and herewith give the authority for the first, which I consider the only correct way.

Hon. James Hammond Trumball who is an eminent Philologist, and our best authority on the Indian language,—having been lecturer on the Indian language at Yale College, editor of "Roger Williams Key to the Indian Language," and said to be the only man who can read Elliot's Indian Bible,—says that *this* mountain is "pronounced Ktaadn by the Indians of Maine." This I consider decisive as the only rule for spelling such a language is to spell it as it is pronounced by the Aborigines.

~~William Willis~~ Charles E. Hamlin who wrote an article on Ktaadn, published in the Bulletin of the Museum of Comparative Zoology at Harvard College for 1880-84, says in a foot note: "The spelling Ktaadn is adopted in accordance with an opinion communicated to the writer by J. Hammond Trumball of Hartford, the most eminent living authority upon Indian dialects."

William Willis in an article on "Language of the Abaquis" spells it Ktaadn. Judge C. E. Potter writing on the language of the Abnaqui Indians spells it the same. In fact I find ^{nearly} all writers on the Indian language spell it Ktaadn.

I also quote Henry D. Thoreau in his well known book "The Maine Woods," Dr. Charles T. Jackson, the first Geologist of Maine, in his report "Geology of Maine": John S. Springer, in his book "Forest Life and Forest Trees:" Capt. A. J. Farrar, in "Guide to Moose^ehead Lake and the North Maine Wilderness;" Lucius L. Hubbard, in "Guide to Moosehead Lake and Northern Maine;" and F. E. Church, in "Camps and Tramps about Kataadn;" in Scribners Monthly. I could add to this number but this is doubtless sufficient. Wishing to obtain as much information as possible, I wrote to the late Joseph Nicolai, an Indian at Old Town, who has been Governor of that tribe, and who is the author of a book published in 1893, entitled "The Life and Traditions of the Red Man." I copy the following from his letters, giving it for what it is worth. "The word is in the language of the Penobscots, and ought to be spelled Ktandn, every letter having its sound." This spelling accords with that given by Trumbull, for the "aa" represents the broad sound, similar to "ar" of Nicolai's spelling.

In the vicinity of the mountain are very neatly painted guideboards put up by the Appalachian Mountain Club, with the name spelled in this way.

It is hoped our map-makers and our state papers may have their attention called to this matter, and hereafter spell the name of our grand old mountain according to the original Indian pronunciation.

Derivation.

The name Ktaadn is without doubt from the Indian language. I give below all that I am able to find in regard to the meaning of this word. J. Hammond Trumbull says it signifies "the greatest or chief mountain and is ^{the} equivalent of Kittatinny, the name of a ridge of the Alleghanies." Again he says "In the Abnaki dialects the compound of mountain names is adene. Kit or Ket means great. The Abnaki name is Ketadene, the greatest or chief mountain."

Judge C. E. Potter, in an article on the language of the Abnakis, says "Ktaadn is doubtless a corruption of kees, "high", and auke, "a place". Keersarge is a corruption of this word. The tribes eastward pronounce their words harder and more gutterally, hence the difference in sound."

Dr. J. A. Chute, who interviewed the Delaware Indians in 1834 and obtained his information from them, gives the meaning of Ktaadn, as "on the high hill."

William Willis states that his informant, Sockbasinan Indian, said it meant "large mountain or large thing."

Henry D. Thoreau, in his list of Indian names, without giving his authority, states that it is said to mean "highest land."

L. L. Hubbard, who has published a list of Indian words given to lakes, streams and mountains of Maine, says it means "the biggest mountain" from Ket or k't, "big" and the inseparable adene, "mountain."

Rev. Eugene Vetromile, missionary to the Etchemin Indians, gives it as signifying "the greatest of mountains."

Joseph Nicolar, a Penobscot Indian, writes as follows: "The word means highest hill. It does not mean mountain because mountain is called wajjo. It is a difficult thing to explain to one who is not familiar with our language, because it cuts off a great many words which are required to express certain things. For instance: spee-gan "high", na-ker-spee-kuk, "highest" pa-nardn-ek, "hill" na-ker-kee-nardn-ek, "highest hill". When I was a very small boy my people said that ^{being} a hill by itself, not connected with any range of mountains, the name of Ktardn was given to it."

Not being familiar with the Indian language I am not able to discuss the subject, but simply give statements as I find them. While there is some slight difference of opinion, these writers mainly agree.

Description.

Mount Ktaadn lies about Lat. $45^{\circ} 53'_{1}^{\text{N}}$ and Lon. 69 W. It covers most of Township No. 3, Range 9 in Piscataquis County, Maine. Its height is not far from one mile above the level of the sea. It must be at least thirty miles in circumference at its base, and perhaps forty, it being very irregular. The sides are steep and hard to climb. The easiest approach is from the north. A road was cut here from the Wissattaquoik stream to the summit of Ktaadn in 18- by Mr. F. J. Tracy of Stacyville, and that gentleman informs me that he rode to the top on horseback. The deer, caribou, and moose, have followed the road in their backward and forward tramps. and in places it has the appearance of a cattle path through the forest. The top of the mountain consists of table lands, elevations and valleys. One slightly sloping plateau covers at least ^{fully} one hundred acres. The elevations are simply great piles of boulders the size of barrels and hogs-heads, which look as if some giant Titan in ages past had heaped them up one by one. As seen at a distance the mountain shows two large peaks. The southern one is called Pamola in honor of an Indian Deity or "Big Devil" which they suppose dwelt there and caused the storms and winds. The northern peak is Ktaadn proper. The peculiarity about Ktaadn that makes it different from ^{any} other mountain in the world and adds to it so much interest, is the "basin." This is a large horse-shoe shaped cavity, like the crater of a volcano except that it opens on one side toward the east. This basin is fully two and

one half miles long by one and one half wide. One writer says there are in it six ponds varying in size from two to ten acres. The walls are, perhaps, two thousand feet high, nearly perpendicular, smooth, and impossible to ascend. At little distances there are torrent beds in which during heavy rains the water rushes down, carrying heavy stones with it and wearing into the solid rock. One can ascend in one of these dry beds, provided he has enough nerve, strength and endurance. The principal danger for a party is that the one ahead may loosen a stone which is likely to send those beneath him into the basin and eternity. From ~~near~~ the center of the basin a long ridge called the "saddle" runs to the summit, cutting the basin into. This ridge affords an easier and less dangerous ascent than the sides. The floor of the basin is covered with loose rocks which have fallen from the top and sides. Hamlin gives the floor of the basin as 2900 feet above the sea. He also says that the height of the main peak is 2287 ft. above the basin, making it 5187 ft. above the sea level, and Panola is 1895 ft. above the basin. At the time I visited the mountain the torrent beds had little streams of pure cool water trickling down them. I went down in one of these beds and climbed up in another. In some places I could stand erect and drink from the rill where the water came gurgling down vertical ledges. I have to state here that in every place I drank water on Ktaadn it was pure, cool, sweet and refreshing. In no place did I find any mineral water or any that had any disagreeable qualities. We frequently spoke of the excellence of the water, and all of the brooks

running from the mountain are potable any time of the year.

Geology.

The mountain is composed of granite. There are two varieties the red and the gray. The former appears to be at the top and the latter at the base. The country around for miles is of granite also. The first rock of a different kind that I found was melaphyr, about fifteen miles to the east. There were a number of boulders of this scattered along for a mile. I imagine it was in situ but have no proof of this. On the summit are evidences of glacial action such as worn pebbles of quartz, argyllite, etc., which shows conclusively that the ice must have passed over Ktaadn during the glacial period.

There have been ^{Several} slides down the mountain side. Williams^{on} says that one took place on the S. W. side in 1816, 1 1/4 miles long. The east side is less than a mile. It occurred between the years 1820 and 1830. Hunters Rest is a curious place and worthy of description. It is at the base of the mountain, on the west side of the long ridge stretching away to the north and known as Russel mountain. It was doubtless formed by a large piece of rock breaking away from the mountain side and sliding to the foot. It is a *sort* of covered room open on ~~three~~ sides. The back side is nearly vertical, about the height of one's head and the ceiling extends out eight or ten feet horizontally, so that the top and sides form almost a right angle like an ordinary room. It is of solid granite and looks as if it were cut out by man.

A few sticks of wood and the ashes and brands from a fire, showed that parties had camped there. It affords good protection from the weather, equalling an open camp, for a hunter, but the thought of what my chances would be if the massive roof should fall, was enough to prevent me from especially desiring to spend a night beneath it.

Meteorology.

Ktaadn is the residence of the Indian Pamola or Big Devil, and they have many traditions of his doings. It is not strange that they should have these fables as the mountain is the birthplace of storms. One writer who has witnessed a thunder storm here says that the lightning flashes were terrific, and the roar of thunder reverberating from side to side of the basin filled one with awe. Ktaadn is commonly cloud capped when all around is bright and clear. Often the coolness on the top is sufficient to precipitate moisture, and showers are of frequent occurrence as the condition of the fuel will testify. I camped for three days on the north side near the timber line, and even the dead standing trees were so wet that it was not easy to keep a fire. I have further evidences of showers on the mountain when below it is clear, as I spent one cold, wet, dreary and sleepless night there when six miles from the base of the mountain, as I learned the next day, there was no rain. One day in particular I remember, clouds were forming on the mountain top, while the sun shone out of a clear sky. At times a vista would open for a moment and one could catch a glimpse of some lake or stream, then it would close up again

and the world be shut out. The clouds would go scurrying past in streaks and patches, hurried along by the wind. At one time the fog settled down into the basin completely filling it while above it was clear and beautiful. Standing on the brink of this cavity I gazed down on the smoky mass impenetrable to the eye and realized for once I was above the clouds. Thoreau had an experience so nearly like my own that I quote his account of it.

"At length I entered within the skirts of the cloud which seemed forever drifting over the summit, and yet would never be gone, but was generated out of that pure air as fast as it flowed away; and when, a quarter of a mile farther, I reached the summit of the ridge, which those who have seen in clearer weather say is about five miles long, and contains a thousand acres of table-land, I was deep within the hostile ranks of the clouds, and all objects were obscured by them. Now the wind would blow me out a yard of clear sunlight, wherein I stood; then a gray, dawning light was all it could accomplish, the cloud line ever rising and falling with the winds intensity. Sometimes it seemed as if the summit would be cleared in a few moments, and smile in sunshine; but what was gained on one side was lost on another. It was like sitting in a chimney and waiting for the smoke to blow away. It was, in fact a cloud factory; these were the cloud works, and the wind turned them off done, from the cool, bare rocks."

Snow remains late in the spring and falls early in the autumn. One party records snow and hail falling the latter part of September. It is not easy to get a clear view of Ktaadn and many writers have been dissapointed. I obtained a good view of the country near by but it was in dog-days when the air is thick, and at a distance of thirty or forty miles everything appeared hazy gradually growing more and more indistinct till it was lost in a blur.

Katahdin.

Wouldst thou hear music such as ne'er was
planned

For mortal ear? Song wilder than the tune
The Arctic utters when its waters croon
Their angry chorus on the Norway strand,
Or where Nile thunders to a thirsty land

With welcome sound from Mountains of the
Moon,

Or lone Lualaba from his lagoon

Draws down his murmurous wave? Then
thou shouldst stand

Where dark Katahdin lifts his sea of pines
To meet the winter storm, and lend thine ear
To the horse ridges, where the wind entwines
With spruce and fir, and wakes a mighty
cheer,

Till the roused forest, from its far confines,
Utters its voice, tremendous, lone, austere.
William Prescott Foster in the Century.

Mrs. A. K. Dole.

mar29 1w*

FOR SALE—A new milch cow, young, sound and an easy milker, particularly suited for a family. Joseph A. Thompson, 83 Centre St.
mar29 2t*

FOR SALE—One Glenwood cooking range; one Glenwood parlor stove; one parlor set; two oak chamber sets and other household furniture. Inquire of Wm. Corson, 28 Maple St, 2 to 4 p. m.
mar29 3t*

FOR SALE—A '94 Syracuse bicycle for \$55; good as new; cost \$125. E. H. Dakin, 63 Exchange St.

FOR SALE CHEAP—Steam launch, 22 x4½ in good repair. Launch is at Newport, Me. For particulars, address 23 Temple St., Boston, Mass.
mch26 1w*

FOR SALE—Horse 7 years old, 1 open buggy, sleigh, pung, harness and robes. Geo. A. Mason, Kenduskeag Bridge
m h21 tf

FOR SALE—The undersigned offers for sale his Iron Foundry, with its fixtures and equipments in good repair and in use.

Fauna.

Deer, caribou, and moose inhabit the forests on the slopes, and deer at least go to the very top, as I saw signs of their being all over the mountain and even found horns which they had shed on the summit.

Bears are common around the base, and without doubt all the animals of Northern Maine ascend to a greater or less height. As I was especially interested in studying the plants of this region I did not observe the fauna closely so am not able to give an extended account of it.

One party noticed a weasel in the basin, near their camp. I saw ruffed grouse as far as the timber line extended, one flock even near the top, ⁱⁿ the scrub. Toads were abundant in the woods ~~up~~ up to where the firs were but a foot high. This was our common toad (Bufo). I saw at least two species of beetles on the summit, and on the southern slope there were numbers of green grasshoppers (Peyotettex glacialis, Soud.). Last but not least by any means, were black flies. On the highest points the wind would generally blow them away, but on the sheltered side of a rock pile ~~and~~ they would swarm on one. It was almost impossible to endure life unless one was besmeared with grease containing tar, pennyoyal, or some other odoriferous substance.

Flora.

The mountain is well wooded on the sides and at the base. A great deal of lumbering has ~~ben~~ done around it, but lumbermen say that as soon as one begins to ascend the timber is not so good. The principal growth is spruce, This is mixed with fir, some birch and other trees. As one ascends, the spruce gradually gives way to fir which grows smaller and smaller till it dwindles away to a little sprawling evergreen that one walks over as he would boughs lying on the ground. On the top of the mountain in the valleys is what is known as "scrub." This consists of fir growth about four feet high and three ~~and three~~ to six inches in diameter at the base. It is generally partially dead at the top, stands ^{as} close together as it can grow, and has its scraggly branches woven together so as to form an almost impenetrable barrier. One could scarcely penetrate a mile of it in a day. A section through one of these trees, -if they can be called trees,-about six inches in diameter, showed over one hundred rings so narrow that they could with difficulty be counted. the wood was very hard and everything bore evidence of its slow growth^t. In one place on a smooth slope, firs about four feet high were growing snug together like a hedge, and so thickly were the branches intermingled that one of the party lay down and rolled over and over on the top for two or three rods, without breaking through. All vegetation hugs the ground. Willows spread out on the rocks and run along like creepers. Nothing rises higher than a few inches. Plants blossom with a half-inch of stem.

Sometimes the flowers are just sticking out of the ground. In places there are flat green patches covered with grasses, sedges, and rushes. The most common of these are Deschampsia caespitosa, Carex rigida, var. biglovia, and Juncus trifida. The billberry (Vaccinium uliginosum) was very abundant and one was surprised to see such quantities of blue, bright berries in so barren a region. *(Vaccinium vitis-idaea) and black crowberry*

The mountain cranberry, (Empetrum nigrum) were common, and these varieties of blue, black, and red berries when gathered and stewed with a liberal allowance of sugar made an appetizing sauce. Other plants ^{are} ~~which~~, distinctly alpine and are more or less common on the summit, are willow (Salix uva-ursa), bearberry (Arctostaphylos alpina), golden rod (Solidago vigaurea, var. alpina), mountain sandwort (Arenaria groenlandica) and club moss (Lycopodium selago). Mosses are common under and between rocks, and black and yellow lichens, ^{spot} the granite boulders. The following list of plants grow on the mountain. All of these were observed after I had climbed some distance. Around the base of the mountain can be found all of the plants common to the northern part of the state.

2

Lichens.

- Cetraria fahlunensis, Schaer.
Cetraria juniperina, Ach.
Cetraria cuculata,
Cetraria islandica, Ach.
Parmelia stygia, Ach.
Parmelia centrifuga, Ach.
Stereocaulion corallinum, Fr.
Cladonia gracilis, Fr. var. verticillata, Fr.
" amaurocrea, Schaer.
" squamosa,
" furcata, Floerk. var. subulata, Floerk.
" rangiferina, Hoff.
" " " var. alpestris, Floerk.
" cornucopoides, Fr.
Umbilicaria probosidea, Dc.
" hyperborea, Hoff.
" erosa, Hoff.
Lecidea sanguinaria, Ach.
Lecidea contigua, Fr.

- Salix argyrocarpa, Anders.
- Salix uva-ursi, Pursh.
- Salix herbacea, L.
- Empetrum nigrum, L.
- Picea alba, Link.
- Abies balsamea, Miller.
- Listera cordata, R. Brown.
- Habenaria dilitata, Gray.
- Habenaria obtusata, Rich.
- Smilacina trifolia, Desf.
- Maianthemum canadense, Desf.
- Juncus filiformis, L.
- Juncus, trifidus, L.
- Luzula spadicea, DC. var. melanocarpa, Meyer.
- Luzula arcuata, Meyer.
- Luzula spicata, Desv.
- Scirpus caespitosus, L.
- Eriophum alpinum, L.
- Carex atrata, L. var. ovata, Boott.
- Carex rigida, var. biglovii, Tuck.
- Carex lenticularis, Mx.
- Carex torta, Boott.
- Carex rariflora, Smith.
- Carex scirpoidea, Mx.
- Carex canescens, L. var. alpicola, Wani.
- Hierochloe alpina, R & S.
- Phleum alpinum, L.
- Agrostis scabra, Willd.
- Agrostis canina, L. var. alpina, Oakes.
- Cinna pendula, Trin.
- Leschampsia flexuosa, Trin.
- Poa laxa, Haenke.
- Agropyrum violaceum, Lange.
- Aspidium aculeatum, Swartz. var. braunii, Koch.
- Osmunda regalis, L.
- Lycopodium selago, L.
- Lycopodium annotinum, L. var. pungens, Spreng.
- Lycopodium alpinum, L.

111
Mt. Ktaadn Flora.

- Coptis trifolia*, Salisb.
Cardamine bellidifolia, L.
Arenaria groenlandica, L.
Oxalis acetosella, L.
Nemopanthes fascicularis, Raf.
Rhamnus alnifolia, L'Her.
Acer spicatum, Lam.
Rubus chamaemorus, L.
Geum macrophyllum, Willd.
Potentilla fruticosa, L.
Potentilla tridentata, Ait.
Pyrus arbutifolia, L. f.
Pyrus americana, DC.
Amelanchier oligocarpa, Roem.
Saxifraga stellaris, L. var. *comosa*, Willd.
Mitella nuda, L.
Ribes prostratum, L'Her.
Epiobium normemanni, Reich.
Circaea alpina, L.
Heracleum lanatum, Mx.
Cornus canadensis, L.
Virurnum pauciflorum, Pylaie.
Lonicera caerulea, L.
Solidago macrophylla, Pursh.
Solidago virgaurea, L. var. *alpina*, Ligel.
Aster radula, Ait.
Aster acuminatus, Mx.
Gnaphalium supinum, Vill.
Arnica chamissonis, Less.
Prenanthes serpentaria, Pursh. var. *nana*, Gray.
Prenanthes boottii, Gray.
Campanula rotundifolia, L.
Vaccinium canadense, Kalm.
Vaccinium pennsylvanicum, Lam. var. *angustifolium*, Gray.
Vaccinium uliginosum, L.
Vaccinium caespitosum Mx.
Vaccinium vitis-idaea, L.
Chiogenes serpyllifolia, Salisb.
Arctostaphylos alpina, Spreng.
Cassandra calyculata, Don.
Cassiope hypnoides, Don.
Bryanthus taxifolius, Gray.
Kalmia glauca, Ait.
Rhododendron rhodora, Don.
Rhododendron lapponicum, Wahl.
Ledum latifolium, Ait.
Loiseleuria procumbens, Desv.
Moneses grandiflora, Salisb.
Pyrola minor, L.
Diapensia lapponica, L.
Trientalis americana, Pursh.
Castilleja pallida, Kunth. var. *septentrionalis*, Gray.
Polygonum viviparum, L.
Betula lutea, Mx. f.
Betula populifolia, Ait.
Betula papyrifera, Marshall. var. *minor*, Tuck.
Betula glandulosa, Mx.
Alnus viridis, DC.

Routes.

There are three approaches to the mountain, one of which is usually taken. One of these is on the south-swest leading from the West Branch of the Penobscot, another is from the basin on the southeast, and the third is from the north. Travellers choosing the first route ascend the West Branch in a canoe with an Indian or woodsman for a guide. The other two roads are by train to Stacyville, then by buck-board or foot, to the mountain about thirty miles. For directions, suggestions, and advice as to travelling, camping, etc. the reader is referred to Hubbard's or Farrars "Guide to Northern Maine" Williams^{on} says that the first party ever visiting Ktaadn ascended in 1804, going up the West Branch.

Literature.

The literature on Ktaadn is not large. There are but few really good accounts, principally because it has not been worked up. Jackson and Hitchcock our only two state Geologists, visited the mountain, but their reports are meagre. No survey has ever been taken of it, so all distances are mere guesses. Its height was determined by Dr. M. C. Fernald who carried a barometer to the summit in 1874, and found it to be 5215 feet above the sea level. This was found by barometre readings on the mountain compared with others in Winn. My own observations at Ktaadn were principally on the flora, and the list of plants given here is all I can vouch for, although everything found in this article is as near correct as I have been able to ascertain. If I have made any wrong statements it is due to ignorance, and I should be only too glad to correct them in a future article which I anticipate. I shall be glad to receive information from any one regarding Ktaadn. It is not easy to investigate this place, as one must go a considerable distance on foot over a rough country, carry his provisions and bedding, endure flies and mosquitos, take the chance of stormy weather, wade brooks and streams, climb rocks, scramble over logs, and crawl through brush. One can only carry food enough to last a few days, hence his stay is usually short. For this reason our information is meagre.

I quote from a few writers just enough to interest the reader so that he may find the whole account and read for himself:

First a few lines from Dr. C. T. Jackson.

"Leaving our camp on the mountain side the next morning at seven o'clock, we set out for the summit of Ktaadn, travelling steadily up the side, clambering over loose boulders of granite, trap, and graywacke, which are heaped up in confusion along its course. We ^{length} at₁ reached a place where it was dangerous to walk on the loose stones, and passing over the right hand side, clambered up along the dwarfish bushes that cling to the side of the mountain."

"Two of our party became discouraged on reaching this point and, there being no necessity of their accompanying us, they were allowed to return to camp. The remainder of our ascent was extremely difficult, and required no small perseverance. Our Indian guide, Louis, placed stones along the path, in order that we might more readily find the way down the mountain, and the wisdom of this precaution was fully manifested in its sequel, At ten o'clock we reached the tableland which forms the mountain's top, and ascends gradually to the central peak. Here the wind and driving snow and hail rendered it almost impossible to proceed, but we at length reached the central peak. The true altitude of Mount Ktaadn, above the level of the sea, is a little more than one mile perpendicular elevation. It is, then evidently the highest point in the State of Maine, and is the most abrupt granite mountain in New England."

(P 215)

Next From John S. Springer.

"Rough granite, moss-covered rocks are spread over its whole surface from the short growth upward. Blueberries and cranberries grow far up the sides. At the time of our visit considerable snow lay on its summit and lined the walls of the great basin. The party, of course, found plenty of drink. The Avalanche brook, having ~~having~~ its source about the middle of the slide, furnished water pure as crystal. The ascent was attended with some danger and fatigue. But what a view when the utmost heights are gained. What a magnificent panorama of forests, lakes, and distant mountains. The surface of the earth, with its many tinted verdure, resembled, in form and smoothness the swelling sea. In the course of the forenoon, light fogs from all the lakes ascended, and, coming to Ktaadn, inter^twined themselves most fantastically above our heads, then settled down and dispersed. But what can be fitly said about the vast expanse of the heavens, to be seen from such an elevation, especially when the sun goes down, and the glowing stars appear in silent majesty? All the gorgeous, artificial brilliancy of man's invention is more than lost in the comparison. Language has no power to describe a scene of this nature. The height of Ktaadn above the level of the sea is five thousand three hundred feet. Its position is isolated, and its structure ^{is} ~~is~~ immense curiosity. From its summit very few populous places are visible, so extensive is the intervening wilderness. On its sides the growth of wood is beautiful, presenting a regular

variation in altitude and size all the way up to the point where it ceases." (p 209)

Thoreau. gives the following account of the roughness of the mountain

"Having, slumped, scrambled, rolled, bounced, and walked by turns, over this scraggy country, I arrived upon a side-hill, or rather side- mountain, where rocks, gray, silent rocks, were the flocks and herds that pastured, chewing a rocky cud at sun set.

They looked at me with hard gray eyes, without a bleat or ^alow.

The mountain seemed a vast aggregation of loose rocks, as if some time it had rained rocks, and they lay as they fell on the mountain sides, nowhere fairly at rest, but leaning on each other, all rocking stones with cavities between, but scarcely any soil or smoother shelf.

They were the raw material of a planet dropped from an unseen quarry, which the vast chemistry of nature would anon work up, or work down, into the smiling and verdant plains and valleys of earth. This was an undone extremity of the globe; as in lignite we see coal in the process of formation." (p 222+223)

Winthrop says in his pleasant way.-

"Ktaadn's self is finer than what Ktaadn sees. Ktaadn is distinct, and its view is indistinct. It is a vague panorama, a mappy, unmethodic maze of water and woods, very roomy, very vast, very simple, - and these are capital qualities, - but also quite monotonous. A lover of largeness and scope has the proper emotions stirred, but a lover of variety very soon finds himself counting the lakes. It is a wide view, and it is a proud thing for a man six feet or less high to feel that he himself, standing on something he himself has climbed, and having Ktaadn under his feet for a mere convenience, can see all Maine. It does not make Maine less but the spectator more, and that is a useful moral result. Maine's face thus exposed has no features; there are no great mountains visible, none that seem more than green hillocks in the distance. Besides sky, Ktaadn's view contains only the two primeal necessities wood and water. Nowhere have I seen such breadth of solemn forest, gloomy, were it not for the cheerful interruption of many fair lakes and brights ways of river linking them." (P 231)

Willaimson in his history of Maine says: "The Indians feared till lately to visit the summit of Ktaadn. They superstitiously supposed it to be the summer residence of an evil spirit, called by them Pamola who in the beginning of Snow-time rose with a great noise, and took his flight to some unknown warmer regions. They tell a story, that seven Indians, a great many moons ago, too boldly went up the mountain and were certainly killed by the great Pamola : for, they say, 'we never hear of them more, and our fathers told us, an indian never goes up to the top of Ktaadn and lives to return.'

They say that Pamola is very great and very strong indeed; that his head and face are like a man's, his body, shape and feet, like an eagle's, and that he can take up a moose with one of his claws"

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