THE MOUNTAINEER

GLACIER NATIONAL PARK
MOUNT STUART
VOLUME VII · 1914



THE MOUNTAINEERS
INCORPORATED
SEATTLE WASHINGTON

The Mountaineer

Volume Seven Nineteen Hundred Fourteen



Price Fifty Cents

Published by
The Mountaineers
Incorporated
Seattle, Washington





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LAKE MC DERMOTT

L. T. Neikirk

Greetings: Chief Eagle Calf ECWKT NPYL ECWKT NTCY ECWKT CNTPY. HEGNGT MCTKCE MYTPY OGTPYGNI. ETKNSE, OGIPYKNE HEGTREY.OGGPE NPYL. HEGOGYAE MGSPG MIYTKPGE OKGE HEGPMSI IGOTEIEGPGE, APEYL MEGKGE GOGTGE.

NMGTIMTK, MEGKGE, O-KY. NMGTIMTK, INGOE IMKGTPY OGNYF. NEI-PT-NG-TI

Listen, Old Man! Listen, Sun! Listen, All Above
People! Give to all Mountaineer people full life.

Make their bodies strong to enjoy the Great Outdoors
which their spirits crave. Old Man, give them
strong legs and sure feet. Help them to hear the
Great Spirit speaking in the mountain tops.

We welcome you Mountaineers. O-ky! Ever welcome in Glacier National Park of the great land of the Red Men.

Chief Eagle Calf.



NEI-PT-NG-TI

The Mountaineer

Volume Seven

Seattle, Washington

Nineteen Fourteen

A LITTLE HISTORY OF GLACIER NATIONAL PARK

WILLIS GIBSON



N the matter of dates the American Indian as an historian is very vague. By the accounts of their old chiefs the Blackfeet nation first hunted in, and laid claim to, that section of the Rocky mountains of Montana which today

has been made Glacier National Park, "many generations ago." Somewhere in that long-ago time, according to these old chiefs, Sour Spirit descended from his Lodge of the Sun, and taught the Blackfeet how to shoot straight with the bow and arrow, how to build commodious tepees, and how to slaughter the buffalo, herds at a single chase, by driving them through brush-built runways and over precipices—and then, before his return to the Sun, for an inspiration to the tribesmen, by magic wrought the likeness of his face on the granite crest of Going-to-the-Sun Mountain. Following on Sour Spirit's visit, their historians have it, the Blackfeet much of the time dwelt in great prosperity in and about the Glacier Park country, camping along the lower reaches of the Swiftcurrent, the St. Mary, and the Two Medicine, securing quantities of buffalo in the valleys and on the plains, and ranging through the mountains in famous forays after bears, moose, and goats, looked up to by all of the neighboring nations because they possessed the finest skins, lived in the most handsome tepees, and dined on the most toothsome game.

Eighteen hundred and fifteen is the first authentic date that can be set down in the history of the Glacier Park country. In that year Hugh Monroe, a youth of seventeen, commissioned to establish trade relations with the Blackfeet hunters, arrived from the north, with a Blackfeet party visited the St. Mary lakes, and became the first white man to glimpse the mountains of Glacier Park. Monroe took up his abode with the Blackfeet, married a Blackfeet maiden, and was given the name of Rising Wolf—for him, in later years, Rising Wolf mountain was named. In 1846, while accompanied by the missionary, Father De Smet, Monroe christened the St. Mary lakes. During the sixties and seventies Monroe, now become a free trader, in company with his family, maintained a permanent camp at the mouth of the

Swiftcurrent. Monroe, however, at no time was an explorer or a mountain climber; during his life he penetrated into the present park only for insignificant distances.

In 1869, a little party of prospectors, Joseph Kipp, John Wrenn, Charles Thomas, and another, bound from Fort Benton to Canada and following the Rocky mountain trail, made a detour to the head of Upper St. Mary Lake—after Monroe the first white men to glimpse the peaks 'roundabout Going-to-the-Sun Camp.

The years of the late seventies and the early eighties were important years in the history of the Glacier Park region. They marked the passing of the Blackfeet as the overlords of the Montana Rockies, the establishing by Uncle Sam of that tribe on the Blackfeet Reservation, and the making of the treaties between the several interested tribes and the Government that transformed northern Montana and Glacier Park's mountains along with it from Indian territory into Government lands and led, later on, to the mountains being incorporated into the Flathead National Forest.

The early eighties were notable also because it was in this period that J. W. Schultz and Dr. George Bird Grinnell took the first steps toward the exploration of the Glacier Park mountains. Schultz, a sportsman, writer, and "out-of-doors" man, in 1882 settled on the Blackfeet Reservation with the purpose of making a book about that tribe, and in the autumn of that year paid a visit to the St. Mary lakes, and climbed and named Flattop Mountain. Much impressed with the region, Schultz interested Grinnell, then the owner of "Forest and Stream," and between 1883 and 1888 Schultz and Grinnell in successive expeditions—accompanied at different times by George Gould of Santa Barbara, Henry L. Stimson, in after years Secretary of War; Lieut. J. H. Beacom, U. S. A.; J. B. Monroe, William Jackson, Wm. H. Seward, Jr., and Yellow Fish of the Blackfeet tribe—thoroughly explored a good share of the Park on the eastern side of and along the summit of the Continental Divide, scaled a great many of the Park's mountains and glaciers, and gave to many of the peaks the names that they bear today. A Schultz-Grinnell party in 1884 accomplished a successful expedition to the headwaters of the Swiftcurrent, in the course of which Grinnell Glacier and Grinnell Mountain were named in honor of Grinnell, and Appekunny Mountain was christened after Schnltz, Appekunny (Spotted Robe) being the name given him by the Blackfeet. In 1888, again, a Schultz-Grinnell expedition carried out another noteworthy exploration-this time of the mountains about the headwaters of the St. Mary River. Gould Mountain, Stimson Mountain, Seward Mountain, and Mount Jackson perpetuate the members of these parties. By their writings concerning their discoveries and adven-



CHIEF EAGLE CALF

He is a Carlisle graduate and interpreter for the Glacier National Park Blackfeet Indians—the same chief shown in the frontispiece.



A. H. Denman

NYACK LAKE CAMP

Crossing Dawson Pass. on the Continental Divide, and dropping down into Nyack Canyon, the Mountaineers found a charming camping site beside Nyack Lake. A peak yet unnamed looms in the distance.

tures during these years Schultz and Grinnell did much to acquaint the people of the United States with the wonders of the Glacier Park region.

In the early nineties the Great Northern Railway came to the Glacier Park country. On its way westward from St. Paul to Seattle the Great Northern carried its transcontinental track up the Marias River to Marias Pass in the Continental Divide, and thence pushed it on westward through the main range of the Rockies, following first Bear Creek and afterward the middle fork of the Flathead River, and so for some sixty miles skirted the south peaks of Glacier Park's mountains,

As a result of the coming of the railway Lake McDonald, on account of its nearness to Belton station, became the objective for occasional sportsmen and sightseers; the Glacier Park region began to become more or less known as the Lake McDonald country.

In 1895 Dr. Lyman B. Sperry, a pioneer "See-America-First" man, originally a professor at Oberlin College, and later a writer and lecturer of note on travel, visited Lake McDonald. For eleven years after that Dr. Sperry was a tireless and invaluable campaigner on

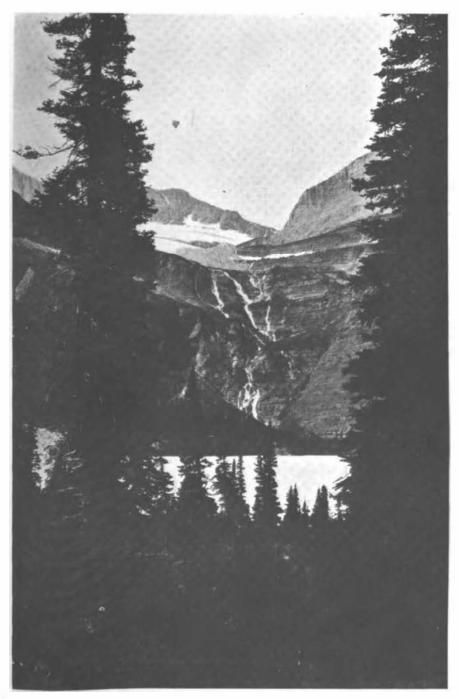


LAKE ST. MARY Rugged mountain buttresses, long fore

Rugged mountain buttresses, long forested slopes with glimpses of low hills beyond, make up the varied panorama which greets the voyager on Lake St. Mary.

behalf of the Glacier Park region—through the summers an enthusiastic explorer of, and guide to, the mountains and glaciers, and through the winters, both from the lecture platform and in the press, an eloquent disseminator of publicity concerning them. Dr. Sperry superintended, and with his own hands built much of, the horse-trail from Lake McDonald up to the glacier which was named for him, and also cooperated with the forest rangers in the construction of the first trail across Gunsight Pass. He was one of the first to advocate Glacier National Park.

In 1905-1906 the movement toward the creation of Glacier National Park began to take shape in earnest. Because of the relative familiarity of the people at large with that section of the region, it was at first proposed to set aside only Lake McDonald and the peaks immediately on the north and east of it; however, through the efforts of those who had adventured through the wonderful land along the crest of the Divide and on the east side of it, the boundaries of the proposed national playground were presently fixed as they are today. The original bill for the creation of the Park was introduced in the United States Senate by Senator Carter of Montana in 1907. After nearly three years of strenuous effort on the part of its friends the Park bill became a statute on May 11, 1910, and Glacier National Park became an actuality.



GRINNELL LAKE

Marion Randall Parsons

The lake, named for George Bird Grinnell, is just off the trail to Lake McDermott. The lake is fed by Grinnell Falls, which flow from Grinnell Glacier above. A party of Mountaineers crossed the Garden Wall and explored the upper slopes of the glacier by approaching from above.

THE GLACIER NATIONAL PARK OUTING

MARION RANDALL PARSONS



HE GLACIER NATIONAL PARK in Montana, created in 1910, stretches from the Canadian border southward along the apex of the Rocky mountains for about fifty miles. It embraces the headwaters of rivers that flow across the

width of the Continent and reach tidewater in the Pacific ocean, the Gulf of Mexico, and Hudson's Bay. To most of the one hundred and fifteen Mountaineers who enjoyed the 1914 outing in this park the Rocky mountains were unknown ground, and their sculpture and coloring, their forests of low-growing and slender trees, and their open character, with wide horizons revealed at every rise in the trail, were both novel and interesting.

Our long railroad journey brought us to the eastern portal of the park, Glacier Park Station, about noon of August second, and after lunching on Midvale Creek we started at once upon the trail. Behind us lay a wide brown plain; ahead hills of green and brown rolled up toward low rocky summits. Woods of firs and two-leaved pines and groves of aspens shaded our trail, which was bordered with gay gardens of paintbrush, asters, gaillardias, and harebells.

From our comfortable camp on Forty Mile Creek next morning we caught our first glimpse of the wild life that was to add so much to the interest of the trip—two bighorn sheep on Bison Mountain, silhouetted against the sky. Our climb up the high ridge above camp gave us glimpses of Lower Two Medicine Lake and of the brown plain to eastward. Later, as we reached the divide, we overlooked Two Medicine Lake with its gray guardian, Rising Wolf Mountain, and the wilder group of mountains at its head. Some of the party turned aside here to climb Mount Henry (8,875 feet), an interesting ascent, though the smoke from a forest fire prevented full enjoyment of its fine view.

At Two Medicine Lake is one of the established camps, an attractive chalet whose veranda overlooks the lake and the high pyramid at its western end, Mount Rockwell. One of the novel features of this outing was the contrast between our free life of the trail and the comparative conventionality of these camp hotels. They are conducted with admirable simplicity, however, and had always a cordial welcome for our vagabond crew. Many a party we met, afoot or horseback, traveling through the park from chalet to chalet and enjoying its beauty to the full. It is remarkable what has been accom-

plished in the way of development in four years. I know of no other national park where the interests and convenience of the traveling public are so considered.

We were up and away early in the morning over the frail toward our first crossing of the Continental Divide at Dawson Pass. Beyond the lake and the open meadow under Pumpelly Pillar climbing began in earnest, over 2,500 feet of steep trail under a hot noonday sun. But in recompense came the exhibitantion of the higher mountains—the sheer cliffs and boldly sculptured summits, the glimpses of snow-fields, the growing wealth of meadow flowers as we pushed upward where spring lingered.

The wind had been blowing gustily all morning, but as we approached the Pass in the early afternoon we faced a furious gale against which we had to brace ourselves with all our strength. Hats went sailing merrily aloft, and falling far below us, close to the edge of precipices, became the quarry of many a spirited chase. One blast of particular violence actually blew five stalwart Mountaineers off their feet. The blazed way down through the dense brush and timber to Nyack Canyon was hard enough for Mountaineers but doubly hard for the pack-train. Long after we had reached the canyon floor the animals could be seen high above us slowly making their way down the steep wall. It was after dark before the whole train was in; one horse, indeed, was not located until morning. We ate a belated dinner by firelight with the moon looking down on us over Mount Helen and filling the whole upper end of the canyon with misty white radiance.

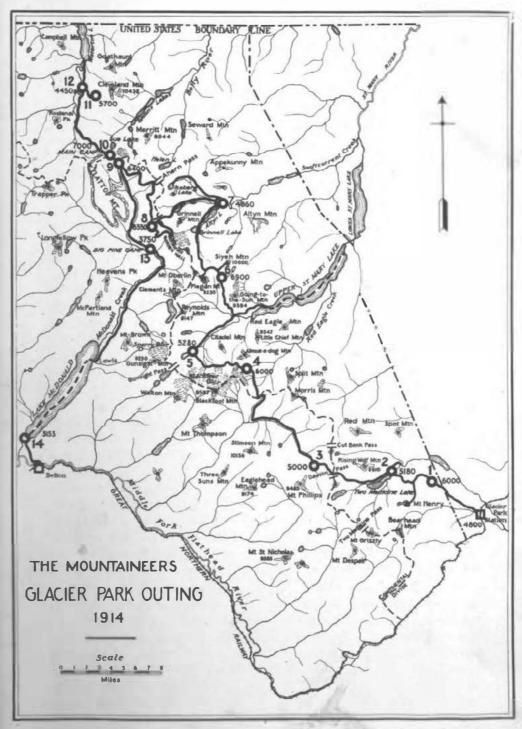
It is strange what a world of difference lies between one's first impression of a wayside camp and the feeling with which one bids it goodby. Nyack camp had little charm for us that night. Its sandy commissary, the bunch of willows that served as dormitory, the wind that chilled us to the bone and made us yearn for tardy dunnage bags, all seemed to promise irksomeness and discomfort for our portion during the day of enforced rest which followed. But the alchemy of the mountains changed the dun prophecy of the evening into a day of golden memories: the dawn with its white banners of light streaming from Mount Helen and Mount Morgan; the bathing pool with its boulderstrewn shore; the laundry scenes; the long afternoon of drowsy idling; the fun and jollity and picturesqueness of the Indian pow-wow campfire; the porcupine that walked by night and furnished such fruitful material for our rhymesters.

In Nyack Canyon, too, the confused impressions of the new scenes began to assume more familiar form, and the beauty of the Rocky mountains to impress itself more cogently upon us. Apart from their unaccustomed forms and sculpture—their pyramidal summits, precipitous cliff ramparts, and sloping bases of shale—their infinitely

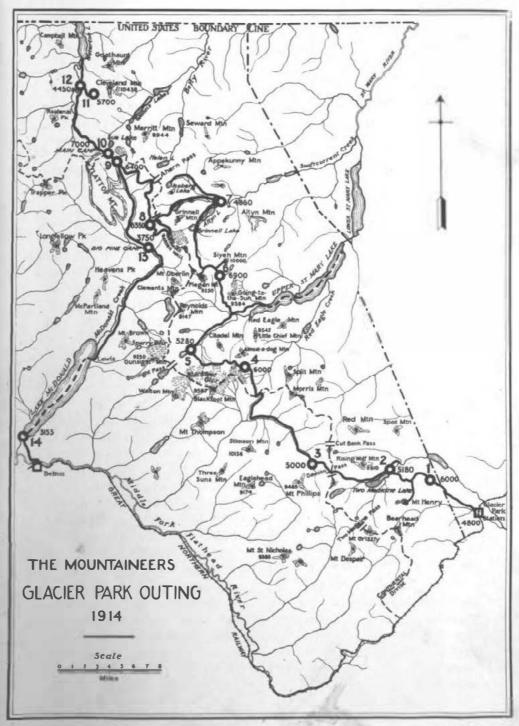


CHAIN OF LAKES FROM SWIFTCURRENT PASS

After leaving Lake McDermott one is repaid for the steep climb up the Swift-current trail by the wonderful view. The rugged summits of the walls, the dark green of the forested slopes, and the exquisite coloring of the series of unnamed lakes, make a picture of unusual beauty. Lake McDermott lies around the shoulder of rock at the right.



Done by R. H. McKee and M. D. Hargrave



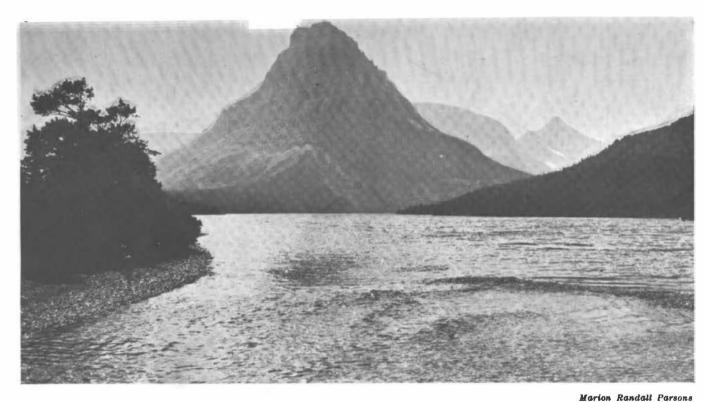
Done by R. H. McKee and M. D. Hargrave

varied color is perhaps the most striking feature of the Rockies. Their stratified limestone walls show tones of brown, green, yellow, red, and gray, further diversified by the white of waterfalls and snow-fields and patches of glacial blue. Their lower slopes, frequently very steep, are clothed in varying shades of green, the dark tones of fir and spruce, the bluish green of willow patches, and the brilliant vernal green of meadows and alder thickets. Many of the trees are familiar to Washington and California eyes—Douglas fir, two-leaved pine, mountain pine, white-barked pine, hemlock, cottonwood, and aspen. Less familiar are the western red larch, the Engelmann spruce, and a slender graceful birch. Blue harebells and yellow gaillardias were the most striking of the new flowers.

Our course next day lay down the Nyack Canyon for eight or ten miles. The forest in general was more luxuriant, the individual trees larger, than those on the eastern side of the range, though still stunted in comparison with the giants of Cascades or Olympics. Lovely twinflowers, Linnæa borealis, the red berries of the dwarf dogwood, the blue, berry-like fruit of the clintonia, and frequent patches of ripe huckleberries, lent the charm of accustomed things to the new and strange scenes about us. The deep-cut sculpture of the stream bed is another attractive feature of this canyon. Its cascade-hung ledges and mossy banks, and its bright bed of many-colored rocks, patterned like a gay mosaic, made Nyack Creek one of the loveliest we saw in the park.

Where the canyon makes its wide swing to the southwest we left it to turn up a side canyon to another crossing of the Continental Divide at Red Eagle Pass. Behind us as we climbed rose Mount Stimson, indistinct, almost vision-like behind its blue veil of smoke. Beyond the pass lay an open plateau which sloped gently eastward from the steep cliffs of the summit peaks to the brink of a second precipice, walling a lower valley. A mile to the north lay a still higher bench that stretched upward to the Red Eagle Glacier. An unnamed, sharp-toothed peak on our left and Almost-a-Dog Mountain ahead were the most striking of the surrounding mountains.

Over the upper plateau, in, out, and round about, we now wandered, seeking a place to camp. On one side were sheltering trees; on the other a stream, but nowhere could we seem to find the combination of wood and water that spelled home. However, close under the wall of Almost-a-Dog, across the main glacial stream, we at length found shelter of a sort and a spring of clear water. A day's halt at this camp gave opportunity for a try-out trip on the Red Eagle Glacier and a lesson in coasting, as well as for a more comprehensive view of the beautiful Red Eagle plateau. On its higher levels tall outstanding piles of rock lent a picturesque ruggedness; next came smooth stretches with summer flowers still in the full flush of beauty—pink



TWO MEDICINE LAKE AND MOUNT ROCKWELL

The picture was taken from the veranda of the Great Northern Chaiet about one half of a mile from the Mountaineers' camp. The Mountaineers followed a trail along the north side of the lake en route to Dawson Pass.

and yellow mimulus, paintbrush, daisies, St. John's-wort, and the shaggy seed-heads of mountain anemones; still lower lay wooded slopes fringing the edges of the secondary precipice over which plunged several fine waterfalls.

The winds that all day had been blowing upon us rose higher during the night and brought with them a cold rain. Drearily enough we packed our damp dunnage, which was to meet us again at Upper



A. H. Denman

THE WILLTE BARK PINE

Isolated specimens of trees modeled by the elements are one of the striking devails of a mountain trip.

St. Mary Lake, and waited for the clouds to lift above the trail-less pass over which we were to adventure. The men presented somewhat the appearance of a band of dromedaries with mackintosh capes and other waterproof garments draped over their various-shaped knapsacks. The women, through the courtesy of Mr. Louis Hill of the Great Northern Railway, were to be provided with bedding at the Gunsight Camp.

Our course across the divide between the Red Eagle and Blackfeet glaciers was in the main an easy one, though above the first slope



of shale rose a chimney where tenderfoot terrors ran high. With the aid of a rope and a helping hand here and there, all climbed it in safety, however, and gathered on the high shoulder above it for a brief rest. The Red Eagle country now lay beneath us with Split Mountain rising high on the east, a lovely picture where shifting sunbeams played in and out among dark cloud shadows. As we climbed higher snow began to fall, and soon the daisies and dainty yellow mimulus were blooming in fields of purest white. The top of the divide was a driving whirl of clouds and snow. Blackfeet Mountain, which we had hoped to climb, was hidden in clouds, and all the glorious features of our surroundings-Mount Jackson, ('itadel, and the Blackfeet Glacier—came to us only in glimpses through the veil of rain and snow. So down over slopes of shale we hastened, through lovely park-lands, across glacial streams and moraines, to Gunsight Lake and Camp, a drenched and muddy but merry band. That night the heaviest rain of the outing fell, to make us doubly appreciate the shelter of the chalets and tents so generously given.

A morning's walk through a charming woodland brought us to lovely Upper St. Mary Lake where again we were the guests of the Great Northern on a launch ride. Like most of the lakes of this region St. Mary is long and sinuous, winding between wooded shores and outstanding ridges like a great placid river. Late afternoon saw us in a delightful camp about a mile below Piegan Pass. A clear bright stream with most commodious bathing pools; broad meadows starred with wonderful gentians of deepest blue; sheltering groves of fir and pine; and high mountain walls about us, made this, our home for two nights, one of the most beautiful and comfortable of all our camps.

We had rain again that night, but only a light shower which cleared into a morning of radiant beauty. We were to climb a mountain that day, but what with laundry duties and the distracting presence of the moving-picture man, it was near noon before seventeen of us started for Mount Siyeh (10,004 feet). For a while our way led through a rising meadow thinly forested with groups of fir and the picturesque branching pine first seen near St. Mary Lake, but soon we left the trail and began to climb the shaly flank of Siyeh. High on the ridge above us we saw a bighorn sheep and watched him leap from rock to rock along the crumbling precipice with envy of his strength and daring as a mountaineer. The climb was not hard; its chief difficulty arose near the base where to surmount an abrupt cliff barrier considerable scouting was necessary. After a short stretch of steep climbing and a longer but less precipitous slope where there was some danger of starting rocks, we were out on the open mountainside and the way was clear to the summit.





A MOUNTAINEER CAMP-FIRE

An Indian pow-wow given in Nyack Canyon

L. D. Lindsley

The most interesting feature of Siyeh is a sheer precipice on its northern face that plunges down 4,200 feet to Cracker Lake. Broken openings or clefts in the rocky wall of the summit crest formed windows whence we could look down for thousands of feet upon the cliffs below. From Siyeh we gained our most comprehensive view of the park as a whole. On the northern horizon we could see Mount Cleveland, and nearer at hand Grinnell, Gould, and a portion of the Grinnell Glacier. Eastward, beyond a fine series of red ridges, a great sweep of brown plain was visible, broken here and there by the blue of a lake. Among the multitude of peaks to the south we identified Stimson, Almost-a-Dog, Citadel, Blackfeet, and Jackson; and along the brilliant western horizon rose the summits of Piegan and Pollock, alight with the prophecy of the coming sunset. Long shadows and the golden lights of late afternoon softened and glorified the whole and lent a rare charm to this, our only high summit of the trip.

. We were now almost midway of the outing when the bright days, each grown brighter and gayer and more beautiful than the last as the friendliness of the mountain fellowship and the beauty of the mountain world weave their spell more strongly about us, seem to slip so fast to their close. No day of the summer was lovelier than the following when we crossed Piegan Pass. Some of the party, stimulated by our enthusiasm for Siyeh, climbed Piegan (9,230 feet), but to most of us the leisurely progress down Cataract Canyon with its wonderfully colored and precipitous cliffs, its groves and gardens and waterfalls, was pleasure enough. At Grinnell Lake we spent a long, lazy noon hour. The shadowed walls of Gould, the rocky face of Grinnell, the glimpse of the Grinnell Glacier between them, and the snowy cataracts streaming from the field of ice to the lake of glacial blue made a wonderful picture. Farther down the canyon lay Altyn Lake, dominated by the splendid front of Gould, and still farther, Lake Mc-Dermott, on whose northeastern shore we pitched camp for two nights.

McDermott is one of the most frequently pictured lakes of the park, but photographs do it scant justice. The pyramid-like spur of Grinnell, the dark mass of Gould, the splendid walls of serrated cliffs at the head of Cataract and Swiftcurrent canyons and above Iceberg Lake form a part only of its beauty. For the greatest charm of a mountain lake lies in its elusive quality of change. In all its varying phases—whether in still moments before dawn when sky and peaks and wooded shores are mirrored upon it, whether blue in morning sunlight or glancing with sunset gold, its glory of light and color is ever restless, beauty passing to new beauty in harmonious order with the leisurely progress of the day.

A short walk from this camp offered the most novel glacial feature of the trip; for however great the evidence of their work and glory in the past, to those familiar with the splendid glaciers of Rainier,

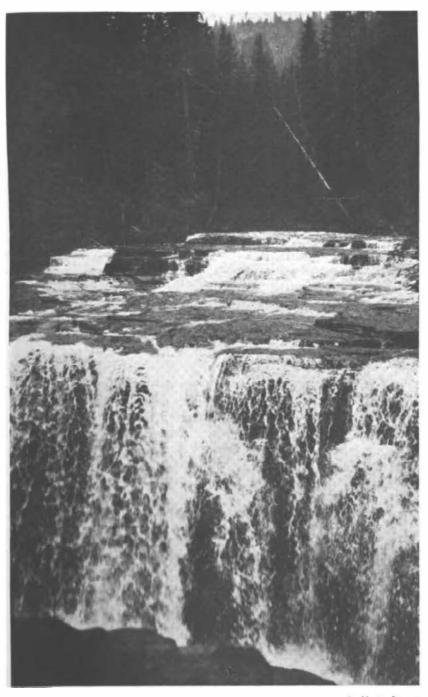


Baker, or Olympus, most of the small residual glaciers of this misnamed park can not fail to be of minor interest. But at Iceberg Lake the tiny glacier at its high-walled upper end imitates the great icerivers of the Alaska flords, and discharges miniature bergs into the turquoise waters.

The following morning we for the third time crossed the Continental Divide at Swiftcurrent Pass. We reached the pass about noon and were lunching on its western side when our attention was called to four bighorn sheep on the rocky wall to the north. They watched us with deliberate interest for perhaps ten minutes, when the approach of a camera armed Mountaineer drove them from their point of reconnaissance and gave us a wonderful exhibition of their daring leaps from ledge to ledge. Later that afternoon while some of us were scrambling along the ridge to the south toward the Garden Wall, we started another bighorn, who took to the lower slopes to escape us and was last seen some two miles away scampering over a low divide into another watershed. But the most exciting incident of this big-game day occurred some half mile farther along on the western flank of Grinnell, when we discovered a large Mazama, or mountain goat, reposing on a ledge not more than fifty feet from us. He was amazingly cool about it, much more so than we were, indeed; for while we distractedly fished for cameras, forgot to set the shutter, or committed similar blunders, he rose, deliberately stretched himself, and strolled out of sight behind a ridge. Upon our giving chase he showed a little more distaste for our society, but throughout his unruffled retreat he was quite the most self-possessed individual of the company.

That was a glorious afternoon. We had swung across to the eastern side of the Continent to survey the little glacier that feeds the Swiftcurrent cascades, and then back again across the flank of Grinnell to a break in the Garden Wall whence we could view the Grinnell Glacier. From this high vantage-point we also overlooked the lovely meadows and groves of Granite Park and located two little lakes which irresistibly summoned us to swim, and whose waters seemed not only to cleanse and stimulate the body but to re-create in us a spiritual freshness and vigor as well.

We were now to leave the more frequented paths and strike northward for Flattop Mountain and "permanent" camp, delusively so called. The pack-train followed the Mineral Creek trail, while we ventured forth in line formation along the high bench north of Granite Park toward Ahern Pass. A trail follows this route also, but it was little we saw of trails or signs of them that day. Near the canyon that heads at Ahern Pass we encountered the first difficulties with brush and climbed down into the canyon over the tops of alders. But it was not until we had crossed this, and some of us had returned from a hasty side-trip to Ahern Pass, that the real stress of the day



P. M. McGregor

NYACK FALLS

Following a forest trail through Nyack Canyon, one comes suddenly upon Nyack Falls. After a drop of some fifty feet it rushes on over a bed of flat, smooth rock so varied in color that it has the effect of a mosalc.

began. After another plunge into a canyon over the tops of trees and bushes of amazing obstinacy, we faced a long upward scramble through patches of brush and along slippery grass slopes of most uncertain footing. The canyon streams, moreover, had gone dry, and the afternoon sun shone its hottest—only the tenderfoot pen could do justice to the thoughts that whirled and seethed in tenderfoot minds that day! A wonderful spring, that gushed forth from the mountain-side a full-grown stream, put a period to the worst of the toil. Nevertheless it was near dark before the last straggler came to rest in the niche of Flattop Mountain that was christened the "Lame Duck Camp."

Higher on the plateau-like summit of Flattop another camp was located, a rather barren spot beside a tiny lake, and to it we moved next afternoon. It had a magnificent outlook, however, and its bleak appearance soon began to assume an aspect of comfort and homeliness under the hands of skilled camp-makers. Some of us, indeed, rather regretted the labor expended when we learned that those who wished to climb Mount Cleveland must start on the morrow. About thirty only of the hardiest Mountaineers signed for this trip, one which promised the spice of the unexpected, as we had to be prepared to knapsack if need be and none knew the route to the summit.

For about eight miles the way was clear, a well-traveled trail that led across Flattop and down Little Kootenay Canyon toward Waterton Lake. Just beyond camp we crossed another Great Divide, for Little Kootenay waters find the sea in Hudson's Bay. Noon found us at Reynold's, the ranger's cabin, where knapsacking promised to begin. To our surprise an old trail was located leading up the western flank of Cleveland, so the pack-train was able to accompany us all the way to temporary camp.

An interesting feature of this vicinity is the great rock slide of comparatively recent origin which blocks the entire bed of the southern fork of the stream on which we camped. For half a mile below the slide the stream bed is dry, then the water suddenly emerges again.

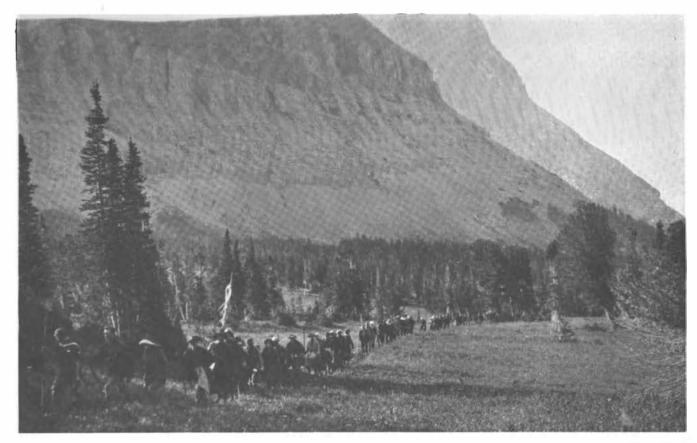
From our camp that evening we watched a glorious sunset behind the serrated crest of Porcupine Ridge where great beams of golden light struck across the brilliant clouds upward nearly to the zenith. But this splendid show marked the end of our triumphal progress, for midnight brought a rain upon us. The women's camp rose at day-break, drenched and forlorn, to find the mountain storm-bound and inaccessible and all the men but the cook and the packer still abed. Down to the cabins we all hastily retreated after breakfast, and there spent the remainder of the day and night, our high enterprise resolved into an orgie of clothes- and blanket-drying, of biscuit- and cornstarch pudding-making, of story-telling and games of cards by candlelight.

A clearing sky next day incited some of us to include in our journey back to camp a trip to Waterton Lake, a peaceful, drowsy sheet of

water that lay still unawakened as we reached its shores. Enticing glimpses of the rugged country toward Brown's Pass and of the precipitous northern flank of Cleveland made us long to linger in this region of the park. But back through the gay autumnal woods, bright with berries, and with the hint of frost in the air, we started on the homeward trail. As we reached the upper part of Little Kootenay Canyon patches of new-fallen snow began to appear and before long we were walking through a wintry landscape where snow covered all the ground. The lower branches of the fir trees, bound to earth by their snowy burdens, released themselves every now and then with a little whispering sigh of content like that of a drowsy child who stirs in his sleep. The sky was overcast, adding to the wintry aspect, and over the crest of the pass our sad and disillusioned pack-horses were drearily pawing the snow to clear the ground for supper. As we followed along the Flattop Plateau, however, the southern and western horizon cleared. The summits along the Livingston Range-Heaven's Peak, Longfellow, Trapper, Vulture, and Rainbow-shone glorious in their mantle of new-fallen snow while the dark valleys below them were filled with trailing, low-lying clouds.

We strolled along, enchanted with the novel beauty, the virgin whiteness of the fields at our feet, the delicate sifting of snow on the ledges of the unnamed peak immediately to northward. Disturbing thoughts, it is true, as to the welfare of our friends in the camp ahead, darkened this picture somewhat; nevertheless, in spite of our real concern, our first sensation on beholding the snow-bound camp was one of irresistible mirth. Each little shelter tent was sitting in an island of green with snow banked high about it; a smoky fire was burning before it where garments and bedding hung steaming, and around which toil-worn figures were dismally clustered, reciting the tale of their experience. Gone was the gay camp of vagabondia we had left so short a time ago, and in its place the grim tents of explorers in an Arctic wilderness. The storm, we learned, had broken upon them the night of our departure in a gale that first blew down all the tents and then brought a deluge of rain. That in turn gave place to snow, which fell for twenty-four hours; and all the little islands where the tents stood, nay, even the spots where our own beds were to rest, had been laboriously excavated out of the snow-banks with tin basins or similar crude implements by these unfortunates who had feared our arduous trip might prove too hard for them! They were christianly glad, of course, that we had not suffered, but the knowledge that while they had worried over our actual safety we had been sitting warm and merry at a ranger's fireside, seemed to add the last straw to their burden of hardship.

It will pass down in Mountaineer history, the memory of that storm at "Valley Forge," not only the hardship and real privation



MOUNTAINEERS LEAVING PIEGAN PINES

P. M. McGregor

Piegan Pines, just below Piegan Pass, was one of the lovellest of camp-sites. The party is here shown en route to Lake McDermott, with the ascent of Piegan Mountain as a side trip. Some of the most precipitous hanging glaciers in the park are to be found high upon the rocky walls adjacent to the camp.

it caused, but the cheerfulness and unselfishness and helpfulness it developed among the sufferers. A fair-weather Mountaineer is but a chechaco, after all, let him weather one outing or ten; only those who have struggled with nature at her worst and still find her fair are worthy of the name of Mountaineer.

Only a day or two now remained of the outing, the best of which was devoted to a trip to the Chaney Glacier. Across it we had a splendid view of the eastern face of Cleveland and far to the north, the brown wheat-lands of Alberta. A few of us crossed the glacier to Lake Sne, charmingly set in a rugged basin where small residual glaciers still hang. A sharp peak, resembling the Matterhorn, rose on the north, and behind us was a ragged pinnacle, as forbidding looking as the Milestone in the southern Sierra. Through a breach in the western wall a sunbeam fell upon the shadowed surface of the lake and shone there like a star in the evening sky. Then campward we turned, back across the glacier and the ridge above, with the range of western peaks shining before us in glorious array of sunset color—back to supper and camp-fire, the familiar, homely ending of mountain days.

Two evenings later we were in our last camp at the foot of Lake McDonald, the long miles down McDonald ('reek, the trip to Avalanche Basin, and the barge ride down the lake all things of the past. The lake lay in a dreamlike calm before us, mirroring the forested shores, the mountains, and canyon at the upper end, and beyond them the crest of the Garden Wall, visited so many days before. As evening drew on the lake blue deepened. Wisps of clouds gathered and trailed across the mountains, and as we watched their deepening shadows a great dark storm-cloud swept down and hid them all. So wintry days come on, bringing work and cares, and the smoke and dust of cities; but for us the summer days still live, shining in memory as brightly as the mountains glowed in the early sunlight next morning, when we left the lake behind us on the homeward road.



RETURN OF PACK-TRAIN FROM CLEVELAND

C. R. Pritchard



A MOUNTAIN GOAT ON THE GARDEN WALL

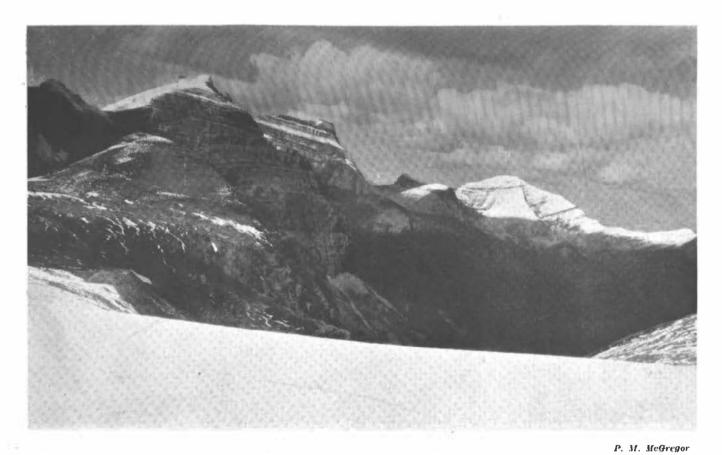
A feature of Glacier Park is the opportunity for closer acquaintance with the wild animals. A party exploring the Garden Wall came within fifty feet of this splendid specimen of the mountain goat.





FORAGING IN NEW FALLEN SNOW

C. P. Fordycc



CHANEY GLACIER AND MOUNT CLEVELAND

The glacier lies northwest of the Flattop Mountain camp. Its crowning snow-field commands a magnificent view of the south side of Mount Cleveland, the highest peak in the park, gleaming in its coat of freshly fallen snow.



THE UPPER SLOPES OF GRINNELL GLACIER

Rocky walls crown the upper slopes of the glacier. Its precipitous slopes and crevasses made excursions upon it too hazardous to be undertaken. This picture shows plainly the dark band of granite occurring at different heights on many of the peaks and ridges in the park.

ICEBERG LAKE

MORTON J. ELROD



THIS is one of the most interesting natural formations of the park. The lake lies at the foot of stupendous cliffs, which surround it on all sides except to the northeast. The Continental Divide makes the summit of the cliffs for

the greater portion. The remainder is formed by Mount Wilbur, an offset from the main divide, but connected with it. From the lake the appearance is of one continuous surface rim of ragged edge. There are between thirty and forty of these saw teeth.

The height of the rock rim above the lake is much greater than is supposed by the average visitor. It is doubtful if many begin to appreciate its height, which is not far from three thousand feet. It varies in places, of course. From the lake it appears almost vertical. As one becomes accustomed to heights and carefully measures each portion with his eye, one soon realizes the impressiveness of the wall of rock above the lake.

Should one climb over the top of the wall west of the lake, he would, on descending a short distance, find the trail leading from Swiftcurrent Pass trail to Ahern Pass. The trail is little used, is faint, and would probably be found only by the expert mountaineer or trailsman.

By climbing the slope of Mount Wilbur a splendid view of the lake and cliffs is to be had. The climb is easy. Some hopeful prospector has dug two tunnels into the cliffs of the mountain. Another is on the opposite side of the lake, extending into the rock of the main divide. These are abandoned and have fallen into decay. To the first two mentioned a trail leads by zigzag route up the loose shale and through the scrub timber.

The view amply repays for the climb. With every foot of elevation the lake and cliffs change. The lake appears lower down, the rock face higher. This is, I believe, invariably true of ascents in the mountains. As one stands at the foot and looks up the distance does not appear to be great. As one rises to a considerable height it seems very much farther from the top to the bottom than it did from the bottom to the top. The uncommon experience of looking from the higher position makes the more profound impression. This is the experience of all boys who have climbed trees, and of all men who have climbed mountains.

From a high elevation the lake looks like a little turquoise gem set in the mountain. The blocks of ice resemble snowballs, and moving tourists and their horses look more like ants than human beings. With field-glasses things have better proportion, but goats on the opposite cliffs seem to be moving against a perpendicular wall.

About a third of the way up the slope of Wilbur is a shelf on the mountain face. This shelf is quite broad, is easily traversed for most of the way by goat or man, and extends almost entirely around the face of rock above the lake. It is blocked by three large snow-fields, but it is possible to cross these by making foot holes in the snow. Tom Scott, the guide, declares he has gone along this shelf, over the snow and across the chimneys, from the open shoulder of Wilbur to the face of the divide opposite. To reach the summit of Wilbur from this shelf is impossible, but it may be reached by continuing up the shoulder before mentioned.

To the right as one faces the lake, which is northwest, close inspection reveals a succession of small ledges, on which, at different elevations, the tourist may see mountain goats, from one to a dozen. These ledges make a regular stairway from the base to summit, over which one may pass by way of the big chimney. This has in former years been a great hunting place. It is only a question of climbing to get a shot at a goat. But to get the game down is and has been extremely difficult.

During the last evening I spent there many goats were seen on these shelves at different places. Our particular attention was directed to a nanny and her kid, high up, both apparently in a hurry. The mother would hurry along, turning now and then, face out, for a look. A golden eagle was circling back and forth, in and out, up and down. Although it was almost dusk the eagle's motion could be made out, even against the dark background of the rocks. It was the eagle, apparently, that was the nanny's object of vision. Scott says the kids are frequently attacked, knocked off the cliffs, and later eaten by eagles. When once they are taken and out of sight the mother pays no attention to them whatever. A nearby chimney seemed to offer a safe retreat for the goats, and we predicted they would be seen no more when once the protecting rocks were reached, which proved true.

The lake is like a large bowl. Until my last visit, in August, 1914, its depth was unknown. My little canvas boat was the first boat to float on its surface. The portion of the lake next the rocks is covered with ice. It looks as though half of the surface were ice covered. At the foot is a small moraine, perhaps fifteen feet high, of rather large-sized boulders. This extends almost the whole width of the lake. On the Wilbur side the shore is too steep for passage. On

My memories of the trip are commingled in delicious medley. Each new-born day was seasoned with the spice of uncertainty. I know now what Stevenson meant when he spoke of "the bright face of danger." Can I ever forget the trembling thrill of Mt. Seattle with its walls of frightful plunge and how it was low tide on the beach of my courage. And how, as the days raced by, perils became more and more genial and confidence in calks and alpenstock grew apace. I recall the teaspoonful of Nuttovito which served for each noonday luncheon and the absence of pang at lack of finger bowls. I can see the "grub line" consuming erbwurst as though they were fattening themselves for market, and I behold knapsack trips which gave impending corpulence a severe setback. Brilliant-hued bandannas flutter in the distance and crisp curls of bacon enrage the hungry eye. Hilarity was abiding guest at campfire and yet reverence led to sleep under the cool infinitude of the stars.

The glaciers, of heavenly origin, taking their mold from the mountains, seamed with the scars of conflict, gradually acquiring a character of their own; wasting yet renewed by the unseen; bearing on their backs the accumulated spoils of the years; stooping at their greatest width and extension into groaning decrepitude; dropping their burdens one by one; giving forth from their wreckage arrowy streams which go leaping on and on to bless the world—the glaciers were to me rough pictures of the meaning and mission of mankind.

The trees, like some old and mellow violin, brought us into many a tender and thoughtful mood. The benediction of insignificance fell upon us again and again as we listened to the murmurings of forest giants which belong among the authentic antiquities of the world. Great cedars prostrate upon the ground, at bay against the vandalism of the years, mouldering in silence, solitude, and neglect, set one to thinking deep, long thoughts, and the elemental stillness of the woods, here and there, when silence seemed to be holding her breath, had for the soul a message all its own.

When Emerson was leaving Williamstown after a lecture, he was escorted to the station by a group of Williams College students. Turning toward the noblest of the Berkshires he said to the young men: "I should think, young gentlemen, that you would print the names of these mountains in your college catalogue along with the members of the faculty." The Olympics with their untrodden solitudes and spiry summits have much to teach the inquiring spirit. "Faith has still its Olivet and love its Galillee." Again and again the soul of every man and woman stood at salute before scenes of wild, incredible beauty and immensity. The "sound of streams that seek the sea" gave praise to Him who holdeth all in the hollow of His hand. Each summit brought its own unspeakable sense of detachment from lower things and its panorama of heart-piercing grandeur. Peaks became

so many raised letters whereby blind children of the Most High were enabled to spell out something more of the divine message. Body. mind, and soul were possessed with a strange ecstacy which no amount of prosy humdrum can ever utterly banish.

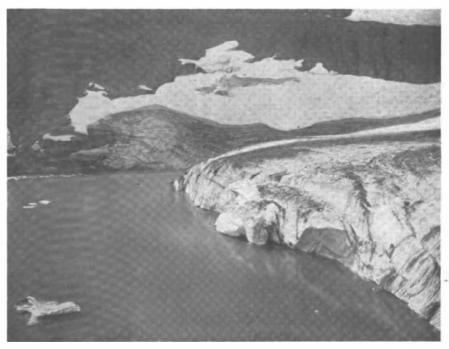
Now and anon, Prof. Meany caught some charming bird of beauty in his golden net of song; brought it down to earth; held it fluttering in his hand for us to feel and admire; but for the main, what our eyes saw, was and is beyond the potency of word-painting. We must side with the youthful theologue who said in describing the glories of a sunrise: "Friends, it is no use; words is a vacuum." But what we felt from time to time is safely at work within us, a silent, perpetual chemistry of good.

I had fun, piles of it. I tasted the luxury of adventure. I wore the boots of inexperience over wicked spots of trail. I interviewed the half-extinct memories of my hunting ancestors. I studied horse ology trying to make up "backwork." Best of all and above all, l found new friends, who gave and give sparkle and zest to living. Richer than all the gifts of mountain, stream, and wood is the priceless benefaction of a trail-born comradeship.



THE QUENIULT

LOOKING EASTERLY ACROSS BEAUTIFUL LAKE MARGARET IN THE LOW DIVIDE BETWEEN THE ELWHA AND



M. J. Elrod

THE ICE FRONT OF ICEBERG LAKE

In the water miniature icebergs are to be seen. The lower edge of the ice-field is discolored and dirty while above lies a newer and cleaner layer of snow ice. Above this is a rock wall one hundred feet or so to the next or upper layer of snow which lies on a shelf.

the divide lateral moraines and fallen rock make piles of debris over which one may travel to the ice. It is possible to climb around a great deal with perfect safety.

All along the whole range within the park is a seam of granite. It is a conspicuous feature of every peak, showing dark gray or almost black in contrast with the other rocks. On Siyeh it is near the top of the peak. It drops to the pass, or nearly so, at Piegan. It shows along Pollock and along the face of Gould. It has cost prospectors from \$1,500,000 to \$2,000,000, in time and expense, for this granite ledge was considered to be the bearer of precious metal, or at least of copper.

This seam of granite stands out prominently all along the rim at Iceberg Lake. At one place, for a considerable distance, it marks the rim summit, while at another it is nearly a thousand feet below the summit.

The pinnacles along the rock rim are quite imposing and stupendous. To one who has climbed around a little over mountains they look quite forbidding in some places. From the opposite side all of them can, without doubt, be ascended. In the evening as darkness comes on, they are silhouetted against the sky, presenting fantastic pictures as the light behind them slowly fades away. For hours, as I lay in my sleeping-bag or sat facing the cliffs earlier in the evening, I have examined these cliffs, estimating height and difficulty. Almost by the hour I have scanned them with the stereos. I know my judgment about them is not very reliable, for I have not yet had experience with any large mountains where I have not been deceived. They were very impressive, and I longed to try them. But to do this one should have a week or more, and I, alas, am doing like every one else, hurrying along to economize. And yet, as one of our party once remarked, there need be no expense to amount to anything in the park, for one can ride a great deal of the time on a "pass."

How far back the lake extends under the ice there is no means of knowing. We made the guess that about a third of the lake was covered with ice. Of course, it may be possible that the mountain extends outward and under the ice, but if so it is entirely unlike the part that is free from ice and visible. My opinion is based on the ice fractures occurring underneath the ice, described later.

The ice mass, glacier, is undoubtedly moving, as shown by the crevasses on the surface. Its rate of movement has not been determined. It is possible to cross the shallow outlet, work a way along the talus slope and over the ledge along the north shore of the lake. Indeed there is an old trail which leads to the prospect tunnel before mentioned. There is a considerable mass of angular and unworn rock fragments at this place. These fragments have undoubtedly fallen from the cliffs above. Sharp, morainal ridges some thirty or forty feet high have been formed. By crossing these one may reach the main ice mass. On this is a considerable sprinkling of rocks from the cliffs above.

The front of the ice and for quite a distance back is broken by yawning crevasses, for the most part almost or quite parallel with the ice front. In these crevasses the stratified structure of the ice wall is well displayed.

At the water the ice is vertical. From time to time it breaks off in huge masses with a loud crack and falls into the lake with a tremendous splash and a great roar. The ice above the water seemed to be thirty or forty feet in places. Where the ice breaks off it leaves a clean blue-white surface, in quite marked contrast to the rather dirty surface in general.

The upper stretch of snow and ice, next the mountain, is rather clean and white. Where it slopes to the cliffs it is quite steep. During August, when I have seen it on two occasions, the surface was well melted, the crevasses were open, and there was a vertical rock



ICEBERG LAKE FROM THE SLOPE OF MOUNT WILBUR

Two large chimneys cleft in the rock are seen. One extends from the shelf to the summit, and is almost free from snow. The other extends from the talus slope to the summit, filled with snow for almost the entire distance. These chimneys are immense seams or cracks in the wall of the Divide.

wall between the main ice mass and the mass on the first rock shelf above. Photographs taken in August, 1911, and August, 1914, show very little difference in the amount of snow and ice. Even the smaller masses lying on the mountain slopes and shelves have almost the same size and outline.

The ice in the lake, which gives the lake its name, is for the most part made up of flat cakes that break off from the ice front. Sometimes these are in sufficient number to almost cover the surface; at other times there are relatively few masses. The love about in peculiar manner. In the evening they may all later the outlet, while in the morning they may all be over the opposite side. They seem to float toward the outlet with the characteristic and drift in the other direction with the wind. At night the wire usually blows. Near the lake the outlet is a wide and shallow creek through which one can wade. It is impossible, therefore, for the ice to leave the lake. It must melt in the lake, and the masses must float around and around until they disappear.

The general notion about the ice in the lake is that the bergs are shaped like those seen in pictures from the Arctic and Antarctic regions. This is a mistake. All of the paintings showing icebergs of this kind in Iceberg Lake are creatures of the imagination. There are no tall pinnacles of fantastic shapes. As a rule only a small portion of the ice is above water.

We spent an hour or more in the canvas boat floating around among the bergs, and had an exceptional chance of studying the ice. To me it seemed very different from the deep blue of the solid ice showing in the cracks and crevasses of Blackfeet Glacier. The ice of Iceberg Lake is soft, porous, full of air, quite spongy looking. It has enough of ice texture to give it a greenish cast, in some places quite pronounced.

Doubtless most visitors wonder how the ice is formed and where it comes from. The formation of glaciers in Glacier Park, and perhaps elsewhere in this section of the country, depends largely upon two factors: the configuration of the mountains and the prevailing wind direction which will cause the snow to blow and drift. A high mountain is not likely to have glaciers unless there are projecting shoulders and ridges behind which snow may drift and lodge. A good illustration of this is St. Nicholas, in the southeastern portion of the park. This is in the ten-thousand-foot class, I believe, yet in August there is but a small amount of snow. In a rift near the higher portion, a crack in the mountain, there was a small snow patch. That was all. Contrast this with the large ice-field on Blackfeet Mountain, the lower edge of Blackfeet Glacier coming down to about 6,500 feet. At Iceberg Lake the elevation is 6,000, and the highest part of the glacier is not far above the lake level.

The prevailing direction of the wind is from the south or southwest. The western face of the Continental Divide here is a long slope, wooded below, with bare rocks near or at the summit. The eastern side is a precipice. The snow which falls on the slopes and ridges is blown while it is light and mobile, and carried up the rock ridges to the summit. When it passes over the rim and drops below, the snow ceases to be affected by the wind and accumulates in enormous drifts. Melting and freezing, assisted by pressure, change the snow to ice. This ice is therefore formed where it now is, from the snow that falls from the mountain, largely on the opposite side. This is quite easily understood when one recalls how furiously the wind blows in the higher regions. A few years ago, when snow had fallen at Missoula to a depth of ten inches, a gale blew the ground bare in about three hours and deposited the snow mostly in the Bitter Root mountains, several miles away.

The ice formerly extended far down the valley. Alden, in his publication, has a map showing the character and extent of the glacier that existed during the great ice age. The ice moving down from Iceberg Lake region joined the mass coming down from the Swiftcurrent and other nearby places, forming what is named Saint Mary Glacier. This extended northward to about the Montana-Canadian line. Here it met the south-moving Keewatin Glacier.

The retreating glacier later filled the entire basin of Iceberg Lake, extending to the edge of the shelf where are the falls. Many evidences go to show that this was the case, for as witnesses are the scarred rocks, the U-shaped valley, and the large boulders left loosely arranged on the shelf rim. Then came a warm period, and the ice retreated to its present reduced size. To the geologist or the student of geology all this is quite apparent as the journey to and from the lake is made. The traveler who visits the lake should read much about the country before he starts. If he does so every step of the way will be interesting.

From the mountains on every side, except at the creek outlet, the slope is toward the lake. At the cliffs of the divide and Mount Wilbur the incline is very abrupt, as has been stated. On the east shore of the lake is an open park country, with scant timber, formerly ground smooth by ice. It was among the trees of this beautiful slope that we pitched our camp. The horses were hobbled and turned loose in one of the long stretches of meadow between the wooded ridge which extended far out and around the shoulder of Mount Wilbur. In 1914 we stayed two nights and almost two days in that beautiful camping spot. Every minute was delightful and we really begrudged the few hours we felt it necessary to spend in sleep. The cold mornings and windy nights were not considered disagreeable, so interesting was the place.



A. H. Denman Citadel Mountain is one of the notable outposts guarding the charming Lake St. Mary.

LAKE ST. MARY AND CITADEL MOUNTAIN

Our soundings showed that the lake was deepest at the middle, 149 feet. Not far from the ice front the depth was only 87 feet. The rocks and debris from the melting ice of the glacier are fast filling up the part of the lake next to the mountain and near the ice front.

From the cold water of the lake two species of living organisms were taken, a mayfly larva and a red entomostracon. The temperature of the water was 36 degrees Fahrenheit. For living animals to exist in such an environment is quite remarkable.

This wonderful and beautiful lake must be seen to be appreciated and a visit to Glacier Park should certainly include a trip to Iceberg Lake.

LAND OF THE OPEN SPACES

O uplifted land of the great open spaces,
O land near the stars and the free higher
air.

Where riseth wild echoes from glucier-torn places,

From summit to summit—thy God's primal prayer!

As clear silver bells, a sweet music is chiming,

A music new rivers forever prolong
When heaven and earth are eternally
rhyming,

O nature melodious-God's oldest song!

In gleam of the crag or in gloom of the hollow,

Yea, even in awe when the storm thunders roll,

Abideth a lure, O, a strange lure to follow, For here with your God may you meet your own soul!

-EDMOND S. MEANY



THE POET AND THE PINE

GLACIER PARK FLOWERS IN AUGUST

WINONA BAILEY



HE outing was in August. If anyone longed for June and the glory of the lilies when he found a hillside covered with pods instead of flowers, any such shade of disappointment vanished before long at the next huckleberry

patch where he joined a company of his trail companions stripping the bushes like so many bears, and he soon decided that the month of fruit was far more satisfying than the month of flowers.

It is true that August is late to see the flowers of Glacier National Park in their greatest profusion and splendor, and yet they are by no means gone. In fact some of the choicest bloom late. In June or July you would miss the gentian which later in every moist valley and even surprisingly high on the dry slopes forms rich blue beds making even the lakes of the park look pale. The St. Johns-wort is still brilliantly golden above upland rills, its hue rivalled by the sun and its neighbor, the vellow mimulus, on the banks. The red mimulus is there too and will remain gorgeous for several weeks unless the stream dries up. The same water keeps fresh the grass of Parnassus, an exquisite white flower, pure, delicate, worthy its classical name. Not far from the water supply are many purple onion heads and panicles of zygadenus. No one who satisfied his hunger with savory hash the morning of the snowstorm questions the identity or the efficacy of those onions. On hillsides too dry for these and many other plants thrive the eriogonums. They come in many species, mostly cream-colored or yellow, often with woolly dove-gray leaves. Being themselves very dry they last a long time. In passing one can never be quite sure whether they are in bud or flower or fruit.

Everywhere as autumn draws nearer the big family of composites grows more in evidence. August in the park is the time for agoseris, arnicas, senecios, goldenrod, and asters. The variety of asters is especially large, from the tall, many-flowered aster to several single-flowered species not more than an inch or two in height growing among the rocks on alpine slopes. The arnicas in contrast to the purple asters are all bright yellow. These two seem to love each other's company for where one masses itself against an overhanging rock, there the other displays itself also.

It is easy to see why the flowers go early on the passes. The winds that sweep across these places take the snow off fast and dry the soil and flowers must bloom with the departing snow or not

at all. On the passes we kept seeing large mats of leaves covered with a conspicuous fruit composed of long greenish hairs spirally twisted. For a while we looked in vain for some lingering blossom but at last were rewarded by a dainty white flower of many petals, evidently an anemone. Earlier in the season the passes must be covered with them. Upon some moraine or high rocky pass it is almost startling to chance suddenly upon what looks like a diminutive California poppy both in color and character. This little flower about a quarter of an inch in diameter is a true poppy and not uncommon in the park. Appropriately enough in these same places a charming little forget-me-not lasted late. There was also a wee polygonum an inch or so tall. If you dug it up you found a root bigger than all the rest of the plant. Though its blossoms were nearly all shriveled then, moss campion had been there too, a little stemless pink known to Wordsworth on his northern heaths.

By no means is it true that the flower is always more beautiful than the fruit. Anyone might pass by in season a certain flower with dull whitish cup, but even he who runs marks that feathery gravgreen head ready to scatter its seeds to the four winds, and in camp at night he asks, "What is that funny thing that looks like a hairy monkey head?" or perhaps, "that nodding plume that looks as if it came from the head of some circus horse?" Whatever the likeness the answer is always safe, "The mountain anemone in seed." There is another that looks like a dull green strawberry on a few inches of stem. Pick it and put it away in press. When next you look at it you will find your page covered with bits of cotton each enclosing a little seed. An anemone also it is with a device for scattering seed that makes all of its genus aptly called wind-flowers. No distant relative of the anemone is the clematis. Covered now with fluffy silkygreen pompons it is more decorative by far as it trails over supporting shrubs than when in bloom. We kept finding the curious pod of a leguminous plant. It was flat and contracted around each seed, forming a series of pouches. Hedysarum it is called. A few white blossoms remained but were outdone in attractiveness by the fruit.

And then the berries! The red twin-berry and the black twinberry, really honeysuckles, make up for somewhat inconspicuous blossoms by very showy fruit. Probably everybody who ate a huckleberry wanted to taste the red twin-berries. Some did, but found them not so good as they looked. Neither does the kinnikinick please the palate as much as the eye, but its bright red berries and shiny-leafed vine redeem the otherwise barren appearance of countless hillsides in the Rockies.

After seven years of tramping in the snow mountains of Washington the seasoned Mountaineer could scarcely be expected to refrain from frequent comparisons of Cascades and Rockies. Nor must such

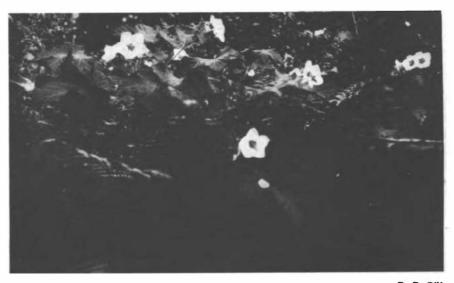
comparisons in any way be termed odious. Plant life came in for its share. From an observation that lays no claim to being other than superficial, the writer would pronounce the flora of the Rockies of Northern Montana more like that of Washington mountains than of the Colorado Rockies. Take the ferns. In Colorado rare indeed are the spots where a few little ferns grow, but in Glacier Park many a damp trail might be, to judge by its floral surroundings, in the heart of the Olympics, so luxuriant are the fern fronds. Bracken is common. Above the timber, under the protecting



GRASS OF PARNASSUS (Parnassia fimbriata)

Winong Bailey
Found in profusion along every
upland stream.

shelter of boulders, are found an abundance of rock brakes as in Washington, holly ferns, brittle ferns, and alpine beech ferns. Even the delicate maiden-hair kept fresh and vigorous under sun-baked rocks on a parched slope. Surely it was watered from some hidden source like the icy spring that gushed from rocks half way up a dry hill-side. The trees differed only in species from ours, but even the novice recognized them as spruce, fir, pine, yew, larch, maple, aspen, willow, birch. Among the flowers it was no surprise to find many a familiar stonecrop, orchis, willow-herb, potentilla, saxifrage and numerous others that vary their species little, if at all, with change of locality; but we did not look for heather as on the Pacific coast. There it was,



R. R. Gull
The thimble berry is found in the foothills and does not grow at any considerable altitude. The flower is white.

THIMBLE BERRY

though, red heather, below Red Eagle Glacier and in other places. Yellow heather, too, appeared several times.

The early part of August is not too late to say farewell to the last of the mariposa lilies. The youngest columbine is still on the plant almost overshadowed by the sturdy seed capsules of earlier blossoms. The painter's brush grown large is fast turning brown. You may still be able to find the "little flax flower blue" and high on Piegan Pass a yellow-eyed indigo-hued polemonium or Jacob's ladder. At all kinds of unexpected turns graceful harebells nod in friendly fashion at you. A host of other plants there are that in waning summer hold harvest carnival. The "botany bunch" collected about one hundred and seventy-five species during the outing and only lack of press room and time to care for them prevented this number from running much higher.



A GLIMPSE OF LAKE MC DONALD

E. L. C.

MOUNT STUART OUTING

REDICK H. MCKEE

HE great Cascade range to the east of Puget Sound has many regions of beauty and magnificence, any one of which would make a fitting and desirable playground for an Alpine club. The particular region around Mount

Stuart is but one of these many places. Because of the favorable report of Mr. H. B. Bennett, who "scouted" the region about two years ago, it was chosen as the objective ground this year for the shorter of the two outings of the club. Off to the east and west of Mount Stuart, there are extensive and interesting snow-fields and glaciers that were only seen at a distance, and that invite a special visit. Ingalls Creek, which flows easterly on the south side of Stuart, has attractive parklike meadows in its upper valley, offering a choice of sites for a beautiful main camp.

Much of this high country has a luxuriant growth of grasses carrying with them a wealth of wild flowers. Nearly all of the common alpine forms of flowers were found, as well as many new specimens said to exist only there and in the Blue Mountains of Washington and Oregon. Quantities of white rhododendron (snow brush) were seen; also many fine banks of heather in full bloom, the yellow heather in unusual quantities, the white comparatively scarce, though the purple was quite abundant.

Bearing in mind these general observations of this interesting summit country, we will start with our party on the outing.

On the morning of July 15th, 1914, our comparatively small contingent from Seattle and Tacoma, accompanied by some of our friends to see us off, assembled at the Great Northern depot at Seattle, to take the 9 o'clock train. With our dunnage, we took nearly complete possession of a tourist sleeper. Our two scouts, Messrs. Gorton and Gist, members of the Outing Committee who had made the final "scout" of the trip less than three weeks before, were with us.

At Everett our numbers were materially increased by the Everett members, including the Chairman of the Outing, Dr. H. B. Hinman.

In due time the train reached Leavenworth (1,165 feet), where we found two more of our members awaiting us. We were now all together, except Rev. Dr. Laurie from Wenatchee, and Mr. and Mrs. Botten and Mr. Hintze of Seattle. These members were to start in from one to two days late and overtake us.

Our equipment and supplies were here taken in charge by the chief packer, Mr. "Dude" Brown, who had two assistants and a train of thirteen pack horses. Mr. Tom Snively officiated as cook and came up to all expectations.

A leisurely walk of four and one-half miles through the open valley south from Leavenworth, brought us to Camp No. 1 (1,300 feet). Camp 1 was just within the canyon of Icicle Creek, on the left or north side, and about 100 feet above the creek. The pipe line of the Leavenworth water supply was there and a convenient faucet supplied water for camp. The scattering trees were yellow pine.

In the evening at the camp-fire, our leader announced that Mrs. Hinman would be the dean of the women, and named committees to take care of certain matters, as Program, Camp-fires, and Resolutions.

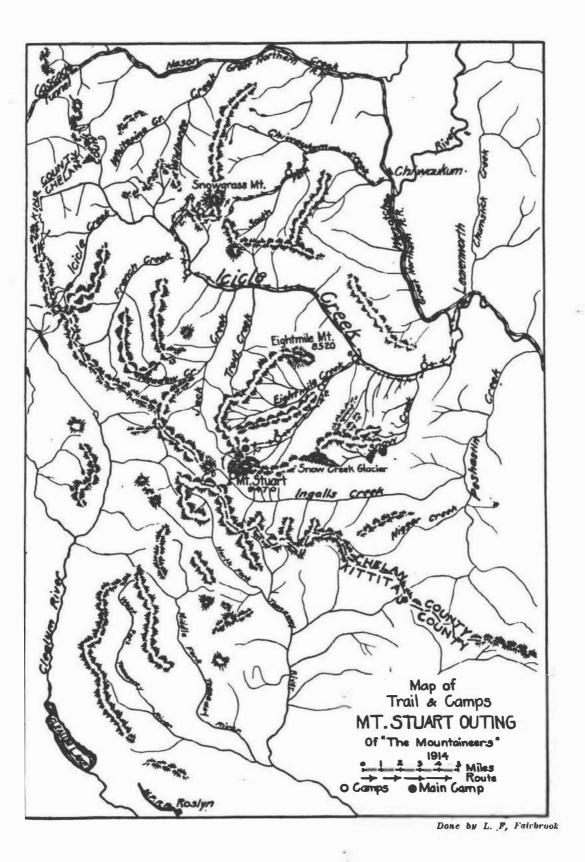
On the 16th, the party proceeded up the Icicle Creek, crossing it on a shaky suspension bridge a short distance above Camp 1, and followed up a trail on the right bank. The pack-train went up the better traveled trail on the left bank, making a ford of the stream just below the mouth of Eight Mile Creek. Our fishermen took an early start that morning, with the result that at night we all enjoyed a mess of trout.

When we turned southerly up Eight Mile Creek in the afternoon, we did considerable climbing through scattered yellow pines, the weather being still quite warm. ('amp 2 (3,200 feet) was made late in the afternoon at the forks of Eight Mile Creek. Our kitchen was set up immediately alongside the rapid West Fork of the creek, just beyond and below the bench where an old log cabin stands. This cabin was the last sign of habitation we passed on our way in. We were interested in noting at this camp a yellow pine, a white pine, and a jack pine within fifty feet of one another.

This first day of real packing had given the packers some trouble in getting it systematized. The sheet-iron cook stove was a troublesome unit, having to be carried on top of a pack.

A prompt start was made the next morning, certain men being sent ahead with axes and a cross-cut saw to open up trail for the horses. The route was up the main, or easterly, fork of Eight Mile Creek. A rocky ascent over the nose of a promontory, a few miles above camp, proved to be a bad place for the horses, and was, perhaps, our worst piece of trail. Once over this short stretch, all went well again.

Towards evening the party, in close touch with the pack-train, arrived at Camp 3 (4,500 feet), at a slight opening in small timber immediately alongside the final westerly fork of the East Fork of Eight Mile Creek, which comes directly from the north slopes of



Digitized by Google

Mount Stuart. The stream showed indications of being of glacial origin by carrying a small amount of glacial silt.

At this camp, late in the afternoon, we were overtaken by one of our late comers, Reverend Dr. Laurie. He had come in on horseback, attended by a man hired at Leavenworth for the purpose of taking back the riding horses.

From Camp 3 entirely new trail had to be constructed, and the next day the trail builders preceded the party as before. A short distance from camp, we came out into a grassy, flower studded meadow where we enjoyed our first good view of Mount Stuart. From here the new trail took us into the woods again, where yellow pine was largely absent, its place being taken by various firs and hemlocks. We skirted the northwest side of the lake that occupies the valley and is about half a mile long. A short distance above the lake, we came out into the rather extensive meadow that constitutes the floor of the valley immediately below the hanging glacier on the north side of Mount Stuart.

The question now was, could we get the pack-train up the rocky ascent to another and higher lake, which had been tentatively picked for the site of our permanent camp. The party and the pack-train were held at the upper end of the meadow while several possible routes to the lake above were scouted. After several hours of searching with no encouraging results, camp was ordered on the rising ground at the head of the meadow where we were waiting. This was Camp 4 (5,200 feet) and became our permanent camp. It was decided after further scouting the next day that it was entirely unfeasible to get our horses up to the upper lake, which is about 1,100 feet higher and perhaps three-quarters of a mile distant.

Main camp was in a splendid setting, with cascades and falls tumbling over nearby cliffs, fed by waters from the glacier nested above the cliffs, and with Mount Stuart towering above the glacier. The sheer cliffs of the north side of the mountain were scored in one or two places with chutes or slides up which long narrow tongues of snow reached from the glacier nearly to the ragged crest of the ridge.

It was still an open question whether the mountain could be climbed from the north side. Three men (Messrs. Hinman, Doph, and McKee) were designated to scout the mountain the next day. They left camp at five o'clock in the morning, July 19th, returning at seven p. m., after having climbed as estimated 8,000 feet. Viewing at a distance the north side, they decided to swing around to the south side, as probably offering a more feasible route up the mountain. The result of this day's examination, supplemented by a half-day's scouting of the north side the following morning by Mr. Gorton and two packers, was the decision to make a knapsack trip over to Ingalls Creek and approach the mountain from the south.

As this bivouac trip and the climb are elsewhere written up by another author, the writer will pass over the interesting details of this part of the outing.

The afternoon of July 22d, the party returned to main camp, where they found Mr. A. H. Sylvester, U. S. forest supervisor, and his wife. They had come up to join us from Leavenworth with a packhorse and a riding horse. Also at camp we found our last remaining



FALLS IN EIGHT MILE CREEK

H. B. Hinman

The Falls is one of a series difficult of access and located near the lower end of Eight Mile Creek. Its interest lies not only in the form and varying detail of the falls but also in the strong contrast of the foaming whiteness with the deep: transparent shadows of the gorge.

member—Mr. Hintze. He had missed our trail and had slept out two nights. Mr. and Mrs. Sylvester overtook him at our Camp 2 and they all came in together.

The following morning, July 23d, camp was broken and the rather long march down Eight Mile Creek was made. Being down hill and over what was now a well-defined trail, progress was rapid and Camp 6 (1,900 feet) was made in good time in a grove of yellow pine

on the right bank of Icicle Creek. This was immediately above the mouth of Eight Mile Creek. Once more we enjoyed fresh trout for dinner. There was a sense of restfulness in this camp under the scattering pines, alongside the clear but rapid Icicle Creek, that was in contrast to the exhilaration experienced in camps of high altitude amongst grand and rugged scenery.

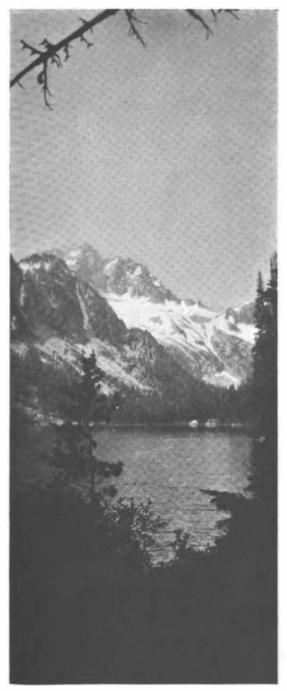
The next morning the party crossed the creek on two pine trees felled for the purpose, the pack-train fording about a mile below camp. We parted here with Mr. and Mrs. Sylvester, who returned to Leavenworth. Mr. Sylvester had previously aided the Outing Committee by information and friendly advice, and our sense of appreciation of this aid was augmented by the pleasure of the visit from him and his estimable wife. We carry with us the recollection of the latter's narration of the legend of Mount Shasta, so delightfully told at our camp-fire.

The weather was warmer at this lower altitude. The well-beaten trail up the Icicle was followed and at noon some of us lunched near the picturesque hunting and fishing cabin of Dr. Hoxsey on the left bank of the Icicle Creek. The valley here is comparatively broad and the stream not so swift. It invites the angler, and our fishermen once more did good work. At the end of the day, we crossed a long foot-log over to the right bank and made Camp 7 (2,750 feet) at Big Hole Ranger Station.

On July 25th, continuing by trail up the left bank, we crossed French Creek, sometimes called the South Fork, on a regular footlog, and shortly afterwards crossed the main creek on a similar log, and soon headed northerly, leaving the valley of Icicle Creek and following steeply up the small tributary—Frosty Creek. Here we did some real climbing again and at noon halted for lunch at a fine meadow known as Lake Mary's Ranger Station, though there was no sign of cabin or camp there. Thence a steep climb of a thousand feet, through brush and scattering timber, brought us to the divide between Frosty Creek and Wild Horse Creek. Here we bore easterly, keeping on open grassy ridges to the higher country.

After advancing and climbing some distance easterly, the party halted at two small glacial lakes on a parklike bench of the big ridge known as Snowgrass Mountain. Here the natural grouping of alpine firs and hemlocks, the gentle grass slopes, and the abundance of wild flowers, made a scene that captivated the eye, and when the pack-train joined us a little later, no one objected to the proposition to make this our camp, although it had been intended that we should cross the high ridge to the east and camp at Lake Flora.

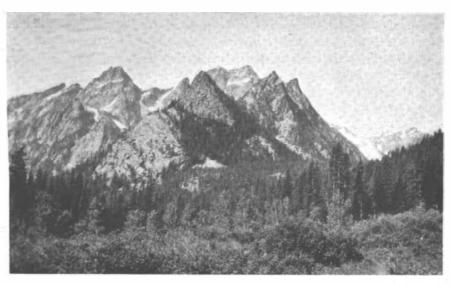
This Camp, No. 8 (6,300 feet), was the highest of our camps. We were all charmed with the quiet beauty of its setting and the



STUART LAKE

R. H. McKec

A well-composed view of Mount Stuart and Lake Stuart to be seen from a point northeasterly from the mountain. The lake is about a half mile long. It is fed and emptied by Eight Mile ('reek.



Garda Fogg

VIEW ABOVE CAMP THREE

Looking southwesterly from a meadow on Eight Mile Creek above Camp Three. Mount Stuart appears in the center of the background at the skyline.

grand extended views to the southwest. The following day being Sunday, the party rested here and services were held, Dr. Laurie officiating.

When Monday morning came, it was with a sigh of regret that each member left this beauty spot where all would fain have remained several days longer. The summit of Snowgrass Mountain lay about two miles to the north and most of the party elected to make the ascent, while the pack-train swinging easterly took an easier route into the headwaters of Chiwaukum Creek.

Up on the high grassy ridge that is generally known as Snow-grass Mountain, the party traveled without difficulty. The panoramic views well repaid the effort of the trip. A flock of ptarmigan was encountered and duly photographed. At an elevation of about 8,000 feet, which was nearly the highest point, the party erected a rock cairn and deposited a record.

The big ridge of Snowgrass Mountain is remarkable for the grass-covered slopes and top, the grass extending nearly to the highest points. The ridge as a whole is above the timber-line. At an elevation of over 7,000 feet we traversed a meadow which was covered with Lyall's lupine and golden aster.

After some time spent in enjoying the views, the party continued easterly off the ridge, working diagonally down over snow slopes and steep grass and heather, into the head of the valley of the South Fork of the Chiwaukum Creek, thence following the

tracks of the pack-train that had preceded us. From the floor of this upper end of the valley, a remarkable sight was the number of white-streaked streams coming down the steep open slopes from Snowgrass ridge. To the south, at the head of the basin, the outlet stream from the small unnamed lake near Lake Flora makes a beautiful misty falls of several hundred feet descent, spreading to an unusual width.

Continuing down the stream on the trail through brush and quaking aspen, the party, strung out into widely separated small parties, felt that the grand scenes were now behind them and that the more commonplace of the lower country was ahead. This was the fact, though the so-called commonplace was so only in comparison with the superlative grandeur of the high country we had just left.

We made Camp 9 (4,100 feet), several miles below the head of the valley. This was our last camp and some appropriate resolutions were proposed and adopted at the camp-fire, including a recommendation to the governing committee of The Mountaineers that the general region around Mount Stuart be utilized for a full three weeks' outing of the club—possibly for 1916—with a main camp south of the mountain on Ingalls Creek.

Following the well-beaten trail the next day, we proceeded down stream through timber that changed from hemlock to yellow pine as we descended, and as the sun rose higher, the shade of the trees was appreciated. Before noon the party came out to the station of Chiwaukum on the Great Northern Railway (1,814 feet). We had about five hours to wait for the west-bound train and many took advantage of this time to go back up the creek and have one more good cold water wash and clean-up. Later at the station, the effect of the rather pronounced heat was largely offset by freezers of ice cream made by the station agent and his family, for one of which the thanks of the party were due to our leader who insisted on standing treat.

Our pack-train being unloaded here, a farewell was given the packers who departed early with the lightened horses for Leavenworth. Some of the members left on an east-bound train for Wenatchee, and at twenty minutes after four the rest of us took the west-bound train that carried a special car for us.



OUR MARMOT MASCOT

P. M. McGregor

Seattle Public Library

On reaching this ridge, as the day was far spent and prudence made it imperative to get down to timber line before dark, a small party of volunteers was permitted to go on and at five o'clock the remainder of the company began the descent, reaching camp at 7:45.

Five men and three women went on. After a bit of steep snow work, a knife-like ridge of ragged rock was followed, first up at a sharp angle, than across the saddle to the main peak. Looking over



SNOW AND ROCK WORK

H. B. Himman

The party is making the climb over some steep snow and doing some bad rock work on the southerly slopes of Mount Stuart.

the edge of this giant causeway, the glaciers could be seen thousands of feet below and in the basin at the foot of the north wall our permanent camp shone white in the setting sun.

It was 5:45 when we planted our flag in the "steinmann" and proceeded to fill out and deposit our record. Those who reached the top were Miss Grace Rand, Miss Eva J. Macdonald, Mr. and Mrs. H. H. Botten and F. Q. Gorton, all of Seattle; W. E. Doph and L. F. Fairbrook, of Everett; and J. A. Laurie, of Wenatchee. A message to the Mountaineers, left by some Cle Elum men three days before.

was found and read. From main camp we had seen this trio on the summit and watched them for an hour or more with glasses, believing that they were our scouts and that they had found a way up the north side. A busy half hour was spent in taking pictures and absorbing as much as possible of the glorious sweep of landscape, from which we were so loath to turn away. The valley, through which Ingalls Creek flows for 20 miles till it joins Peshastin Creek, stretched away



SUMMIT OF MOUNT STUART

P. Q. Gorton On the summit of Mount Stuart, July 21, 1914, at 5:45 p. m.

to the east. To the northward Jack Creek flows through its beautiful valley toward the Icicle, and to the northeast we looked down the valley of Eight Mile Creek up which we had come. Everywhere to the north were tangled masses of mountains with here and there a lofty peak lifting its dome above the evening haze. To the southwest, beyond many timbered ridges, Mount Rainier loomed ghost-like in the distance.

We were struck with the peculiar character of the mountain itself. The peak is rent, shattered, and riven almost beyond description. It was 6:30 when we began the descent. The first few hundred feet down the steep ridge one could easily imagine that he was descending from the top of Cheops. But when the snow was reached it was the matter of a few minutes to descend slopes it had taken hours to climb. The whole party of twenty returned by the route that should have been followed in the ascent and those who had made the top soon struck the well-defined trail left by the others and followed it almost to timber-line. As soon as the valley was reached darkness overtook us and the three miles to camp through the woods proved the most wearisome part of the day's work.

The packers met us, at length, with lights and lunch and at midnight we were telling our story around the camp-fire, grateful for the perfect day and for the safe return from a climb and tramp which we felt to have been well worth while.

The return to main camp, on the north side of the inountain, was made the next day, the crossing chosen from Jack Creek basin being farther west and 200 feet lower than on Monday. This new route brought us down to the site originally chosen for permanent camp. Noon lunch was eaten on the Jack Creek side of the ridge, the panorama of beauty all about us causing the hardtack and trimmings to be almost forgotten as we feasted upon the wonderful scenery. Great masses of snow brush, heather, asters, blue-bells, and other flowers made vivid splotches of color on the hillside, as though Dame Nature had spread out a crazy quilt for an airing.

Reluctantly we left this feast of natural beauty and crossing the ridge dropped down over the snow-fields to the lakes, the "Dean" and the rest of the women appropriating one, and the "Czar" and the other men enjoying a dip in the second, some distance down the slope. After a good rest in the warm sunshine and parklike surroundings, we resumed our descent, reaching camp at 4:30. High above us the old mountain invited, threatened, and cast its awesome spell upon the beholder, but surmounting its loftiest peak we could discern a rock mound, and set in that a staff that glistened in the waning sunlight, and floating proudly from the staff was Old Glory, and we breathed a deep breath of satisfaction as we turned our gaze away, for The Mountaineers had planted that emblem there.



R. H. McKee

UPPER EIGHT MILE CREEK FROM GOAT PASS The panorama shows the view looking southeasterly from the pass including in its sweep Stuart Lake and the glacier on the north side of Mount Stuart, appearing in the right fore view.

CAMPS AND CLIMBS IN THE SELKIRKS

EDWARD W. HARNDEN



HERE are places we revisit as a matter of habit, following the line of least resistance. There are other places that call us back irresistibly, where, no matter how often we return, we find a new charm, new corners to explore, new

things to interest. Of course, these latter are mountain places! There must, of necessity, be "a vision to seek, a beckoning peak"; and when there are added to splendid alpine peaks and passes, such an unrivalled combination of glacier, river, lake, and canyon scenery as is found in the Windermere and southern Selkirk region at the head of the Columbia river region of western Canada, the call must be obeyed.

This new mountain region, as readers of previous articles in The Mountaineer may remember, lies about one hundred miles south of the Canadian Pacific railroad, in the heart of the mountains, not far north of the international boundary and northwest of Glacier National Park, in Montana.

With companions I had knocked about the region several seasons, exploring, mapping, climbing, devoting particular attention to Toby and Horse Thief creeks, where the East Kootenay scenery culminates. These western tributaries of the upper Columbia head at right angles to the river about forty miles up in the main Selkirk range, which forms the divide between the East and West Kootenay sections. The Selkirk mountains are on one side of the Columbia river, the Rocky mountains on the other.

We had become satisfied that the three high peaks of the Horse Thief Creek region were, in the order of altitude, one at the head of the main creek, about 11,300 feet (which we have called Mount Bruce, after one of the leading pioneers in the Columbia valley); Jumbo, at the head of the South Fork, 11,190 feet, and Farnham, at the head of Macdonald Creek, 11,120 feet. Before our arrival in the summer of 1914, Captain and Mrs. A. H. McCarthy, of New York, with an Austrian guide, had climbed Farnham, a particularly hard peak.

I had been disappointed in an attempt on Jumbo in 1913, at which time my friends (Mr. W. C. Phelps of New York and Mr. C. D. Ellis of Windermere) and myself had been attracted to the great height of Mount Bruce. Mr. A. O. Wheeler, director of the Canadian Alpine Club and a leading topographer of the western Canadian mountain country, on an expedition with Dr. Longstaff a few years ago into the Bugaboo creek region, about twenty miles to the north, had noticed a dominating peak in the Horse Thief section, which he called "Eye-

Emerson and I made our reconnaissance of Mount Monica in 1911. Monica dominates the southern end of the glacier and commands the Starbird pass from the divide separating East and West Kootenay. Bruce commands the northern side of the glacier and forms a barrier between the headwaters of the main Horse Thief Creek and the North Fork of Horse Thief, as well as between Horse Thief and No. 2 creeks. The peak rears up four-square to the winds of heaven, a huge truncated pyramid, with three sheer, impossible sides, but with the southeast side so eroded as to offer an apparently feasible route to the top.

In approaching the base of Bruce it seemed clear that time would be saved by not following the long curve of the Starbird Glacier horseshoe from the tongue to the upper snow-fields; that it would be better to follow the lower part of the glacier to a point where it winged out on to the slopes of our reconnaissance peak and then make a direct, steep traverse over the shoulder of this peak, rising at our right, from the lower glacier to the snow-fields, the out-swinging curve of the middle glacier lying to our left and far below. This route we followed. as outlined in our reconnaissance—lower glacier, mountainside traverse, upper glacier, and snow-fields on the upper ice, threading our way between crevasses, aiming for a narrow, steep snow and ice slope to the west of the summit. It rarely pays to vary a route that stands out clearly in a distant reconnaissance because of attractive routes that seem to present themselves when close to a peak. The perspective of the distant view is usually more accurate and difficulties that are concealed at close range are more obvious. This was my experience on Monica in 1911, when we were attracted at close range by a rock comb that was less appealing in the distance, and that proved impracticable. We then conquered the peak by the route we had originally decided upon. It was the same on Bruce. At close range the eastern rocks looked seductive, but investigation—in which fortunately we did not lose much time-showed that the route we had originally planned was the best.

On the final snow and ice isthmus that led to upper rocks we negotiated hidden crevasses carefully, avoided the east side of the slope where rocks were at intervals slipping down from above, worked up on to a rock comb at our left, and followed the narrow ridge of this comb to the broken rock and snow-covered ridge constituting the peak.

Mount Bruce offers the most tremendous and inspiring mountaintop view I have seen. This is because of its splendid isolation in the midst of tremendous snow and ice-fields, beyond which, looming up from base to peak in all their height and majesty, rise the other superb neighboring summits of East and West Kootenay—and there are noble peaks worth investigating across the divide, in West Kootenay. A glorious panorama is revealed—the sharp drop on every side to the glaciers and then the majestic lift from foot to summit; the sweep from Mount Farnham in the east, past the huge bulk of Jumbo to the southeast, and around to the south, taking in Monica with its wonderful, virgin-white rolling snow and ice-fields, and, forming a dramatic foreground, the bristling summit rock-ridges of Bruce. The eastern side of Bruce is such a sheer precipice that rocks thrown over the edge hit the wall but once or twice before striking the North Fork ice-fields thousands of feet below, where, whizzing and cartwheeling at terrific speed down the slopes, they finally disappear in one of the crevasses of the North Fork Glacier. In the north, although somewhat obscured by smoke haze, were the Spillimacheen mountains, dominated by Ethelbert, while over in West Kootenay were several fine peaks beckoning us to that "Land of Beyond."

We had started at four in the morning and attained the summit at one p. m. After spending more than an hour on top, during which we took pictures, "aneroided," made notes, and took points of the compass, Dave building a "whale of a cairn" to commemorate the first ascent of Bruce, we descended, reaching camp at eight p. m. It was an interesting climb and scenically a wonderful experience. We had covered in distance approximately twenty miles. Bruce is about 11,300 feet in height, the highest peak of the immediate region and probably the highest in the southern Selkirks.

Our experience in the South Fork of Horse Thief, which we next visited, was also intensely interesting. Entering the higher South Fork from the main creek, we skirted the edge of a wonderful rock canyon of the narrow, deep, and tortuous type—of the same order as the Aareschlucht, in Meiringen, although much wilder, more contorted and striking. The mountain walls of the South Fork, heading up as they do into the crest of the southern Selkirk ranges, the Farnham range on the left, and the Jumbo range on the right, are particularly impressive.

Our South Fork camp-site was that of 1913, of happy memories. A certain lady had then named the South Fork, particularly as viewed from our camp, "Enchanted valley." True, our perfect little mossy brook was swamped by the rising glacial stream, but noble Sir Charles and St. Peter's rose abruptly across the creek in all their sublimity, and facing them, at our backs, was the tremendous, precipitous, snow-covered mountain wall, culminating at the head of the Fork in glorious, glacier-hung Jumbo.

In our attempted ascent of Jumbo, on September 6th, the disappointment of 1913 was repeated. We chose a good route, traversing the lower stretch of Jumbo Glacier to an outlying southern hump, ascending this to its junction with the upper snow-field and glacier, and traversing this almost at the sky-line, far above the cleaver, until the summit loomed in sight. We reached by 11 a. m. a point within



Herbert W. Gleason

MOUNT BRUCE FROM RECONNAISSANCE RIDGE

One of the dominating peaks of the region at the head of Horse Thief Creek in the Southern Selkirks. The glacier shown is a section of the Starbird Glacier, of whose extent and magnificence but a vague idea can be given. The ascent was made over the snow-field at the left, up the steep snow slope to the arete, and up talus and snow slopes to the rocky summit.

an hour of the summit—and then, with victory in sight, were turned back by a thunder and sleet storm!

Jumbo is, with the exception of Rainier, the most tremendous mountain bulk I have seen. It is really an uneroded range, surrounded and dotted with outlying protuberant summits. These will at some distant day be individual mountain peaks, being outer sentinels of a huge snow summit plateau, the whole mass suggesting an enormous molar. So huge is Jumbo that Lake Maye, on the main creek, abuts its western outriders, while miles away, to the east and south it bulwarks the South Fork of Horse Thief Creek and the Jumbo Fork of Toby Creek; and on its upper surfaces and slopes rest the greatest snow-fields and glaciers of the whole Selkirk range. Jumbo Glacier, which falls from the mountain to the head of the South Fork, is a splendid example of the ice-fall type with wonderful cascades, seracs, crevasses, and broken surfaces; while the Starbird Glacier, at the head of the main creek—not a Jumbo Glacier, but practically a part of the same glacier system—is an equally fine example of the gradually sloping, regularly and evenly crevassed ice-field.

We had had our try at Jumbo and were driven back by the storm. We waited a few days for improved weather for another try, but hopelessly. Finally the ladies' time was up and they were accompanied out to the valley by Gleason, while Dave and I waited for another chance to make the climb. But conditions grew steadily worse, until finally snow fell in "Camp Totem," at the tongue of Jumbo Glacier. So we reluctantly folded our tents and stole away.

Our 1914 outing was over. We had had an ideal party and an ideal time; had got good photographic and topographic results; had philosophized and swapped experiences at those never-to-be-forgot-ten camp-fires; had tramped, climbed, forded streams, hewed wood, fetched water, cooked, washed dishes, joked, and told stories together; had viewed tremendous scenes, splendid sunsets, glorious canyons, mountains, glaciers, and waterfalls—real human beings, living in a real human and worth-while way. It was now over, but the memories would remain—memories which would cause each of us to look forward hopefully to an encore, with a fervent

"Thank God! there is always a Land of Beyond
For us who are true to the trail;
A vision to seek, a beckoning peak,
A farness that never will fail."



Herbert W. Glesson

FIRST GLIMPSE OF LAKE MAYE

Note the infinite variety of the scene which is typical of the region—the alpine park with its heather, flowers, and larches in contrast to the lake and glacier flanked by towering walls of rock.



H. B. Hinman

THE LODGE

Constructed of logs and shakes from the dense surrounding forest the lodge nestles in its midst. It is solidly and stoutly built on an out-jutting shoulder of the western slope of the Cascade mountains two miles southwest of Snoqualmie pass. At an elevation of 3200 feet above sea level, it is 500 feet below the divide at its nearest point, and 1100 feet above the South Fork of Snoqualmie river, which valley it overlooks. This photograph was taken from a tree, which makes it appear that the ground surrounding is level, but in reality it drops away steeply in all directions except at the rear.

THE LODGE

SIDNEY V. BRYANT



URING the Olympic Outing of 1913 it was decided that The Mountaineers should build a lodge in some suitable locality in the mountains. At the first monthly meeting of the Club after the trip the matter was formally put be-

fore the members and was unanimously endorsed.

When about \$500 had been pledged the board appointed a committee, consisting of Messrs. S. V. Bryant, Chas. Albertson, Chas. Hazlehurst, I. M. Clark, and J. H. Weer, to proceed with the work. Owing to ill health Mr. Clark had to resign and Mr. A. S. Gist was appointed to fill the vacancy.

The Cascade mountains, in the Snoqualmie Pass, on the Chicago, Milwaukee and St. Paul Railroad, seemed to offer the best available territory, and after considerable scouting, a site was located on a knoll five hundred feet above the railroad tracks, one mile and a half from Rockdale, and two miles and a half from the Snoqualmie Pass. From this knoll a splendid view is obtained of the South Fork of the Snoqualmie River, and the Denny Creek valley; Silver Peak, Granite Mountain, the Matterhorn, and Denny Mountain are also in full view. The Snoqualmie Pass road, just completed, is easily reached by a good horse trail. Two lakes, the larger one being twelve acres in extent, are less than a quarter of a mile distant from the lodge.

November ninth a special excursion party of one hundred and eleven members visited the locality and they were loud in their praises of it.

Snow conditions were studied during the winter. Snow lay on the ground about the first of November and lasted until the end of May in shaded spots. The past winter was very mild and the snowfall light. January first there were about eighteen inches of snow on the lodge site and in March about three feet, although in the more exposed places the depth varied to six feet.

Mr. Carl Gould drew up the plans for the building, and work was commenced May eighth, as the lodge site was clear of snow, though in other places it lay quite deep.

A huge hemlock was the first obstacle to be removed, and yielded only to the persuasive powers of dynamite. Rain and frequent snow-storms rendered the handling of peeled logs a very difficult problem and delayed progress, so that instead of being completed on June twenty-first, the day set for dedication, only the walls and part of the logs for the roof were up.

In a pouring rain Prof. Meany, our president, dedicated the building, and Prof. Turner, of Harvard University, Mr. A. H. Denman, and Major Ingraham gave short addresses. After the exercises a working bee was started, and everyone joined in carrying shakes up to the lodge.

On the twenty-third of June the construction crew had to go on another job, leaving the work at a stage where it would not pay to put in another gang of log workers, and carpenters with a knowledge of log construction could not be found. Mr. Boothroyd, a member of the club, came to our assistance. About the third of July he took his wife and family up to the lodge and remained there until the first of September, giving most of his time to work on the building. Other enthusiastic members helped in their spare time, and by the last of August the building was closed up and ready for use without hiring help, with the exception of one week when two carpenters were hired to put in doors and windows and to make window seats.

The building consists of a large living room, 20x34 feet, a kitchen, 16x18 feet, and the ladies' quarters, 15x42 feet, subdivided to give a small drying and wash-room. In the attic over the living room are the men's quarters. The chief attraction in the living room is the six-foot fireplace, which, thanks to the builder, Mr. C. P. Farrar, draws perfectly. The kitchen is equipped with two stoves, cooking utensils, and dishes to accommodate about twenty-five people. Running water will be piped into the building from the rock slide at the back.

The lodge will be available to members all the year. In winter, when parties can revel in snowballing, snowshoeing, and skiing to their hearts' content, it ought to be even more popular than during the summer months.

1915 OUTING-MOUNT RAINIER

Preliminary plans for the 1915 outing are under way and they contemplate making the entire circuit of Mount Rainier (14,408 ft. elevation)—a feat heretofore accomplished only by a few people on foot and never by horses. Camps will be made near timber-line on the flanks of the mountain in the park country amidst a wealth of flowers and alongside glistening glaciers and great canyons. Ever and always the tremendous bulk of Mount Rainier will loom near at hand, lone-standing, up-rearing, majestic. The main climb will be to the top of the mountain, possibly by a new route.

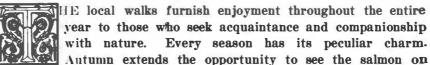
This will make an attractive trip to such mountain climbers as are planning to visit the Panama exposition at San Francisco. Write the Secretary of "The Mountaineers" for later information.



COASTING ON P. M. M.

THE LOCAL WALKS

GERTRUDE INEZ STREATOR

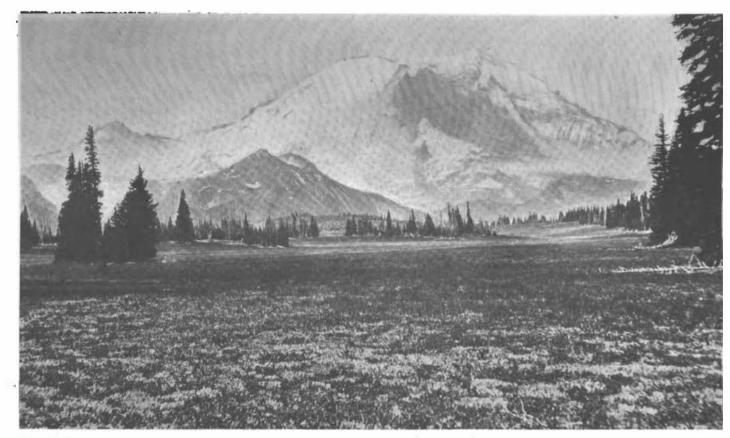


their-run up stream; to note seed distribution; to watch the migration of birds; or to observe the preparation of insect or animal for winter. Spring and summer vie with each other in bestowing perfect weather for trips upon the lakes or Sound. Yet winter offers the best time for long walks through the dark fir forests where the western spring beauty (Claytonia siberica) and the little yellow violet (viola sempervirens) may nearly always be found, since these small flowers are never quite sure when it is winter in this mild climate. Winter also brings the hardy sports on snow and ice as the great Tahoma and the other peaks of the Cascades call and beckon the Mountaineers to come and play in their vast snow-fields.

The length and kind of walk vary with the occasion. The Saturday afternoon walks are usually four or six miles; those on Sunday, eight to thirty miles; the mid-week moonlight excursions are three or more miles to some place on the beach, where supper around a great camp-fire is enjoyed; the two-day or week-end outings are not only walks but also climbs.

These two or three-day outings form a chain of pleasant memories of: The trip to Mount Rainier (Dec. 28-Jan. 1) and to Scenic Hot Springs (Feb. 21-23) for winter sports; Wildcat Lake and Mount Baldy, across the Sound (May 23-24); Mount Wow (May 30-31) with its hardships and its reward in the magnificent view of Mount Rainier; the boat trip up Hood Canal, along the base of the Olympic mountains (July 3-5), with climbs to Idlewild and Liliwaup falls; Labor Day at the Lodge (Sept. 5-7), with side trips to Snow Lake, Mount Snoqualmie, and Chair Peak; Rainier National Park (October 10-11); and last, but in no way least, Helping Hand Day (October 23-25) at the Lodge. The Local Walks Committee, in conjunction with the Lodge Committee, with wise sagacity, conducted a company of sixty-one sturdy Mountaineers to the Lodge, where everyone assisted to the best of his ability in cutting wood or otherwise preparing for winter.

The splendid work of the Local Walks Committee has made it possible for many to become acquainted with a great range of country. Much credit is due to those who have thus extended all these pleasures "to him who in the love of nature holds communion with her visible forms."



REGION OF THE 1915 OUTING

Lydia Lovering
Mount Rainier from Grand Park

No.		Local Walks		ND SPECIAL OUTINGS		
	1913-14	Route	Miles	Leader	Attendance	Cost
196	Oct. 26	Silverdale to Hood Canal	11	E. L. Chapman, Helen Gracie	194	\$.50
197	Nov. 9	Lodge Site, Rockdale		Lodge Committee		1.60
198	Nov. 16	Newport to Coal Creek and Renton	10	G. A. Stanton	26	.30
199	Nov. 23	Port Madison to Manzanita and Crystal Springs	10	Hazel Royer		.60
200	Dec. 7	Brownsville to Lenni and Manette	10	Inez Wynn		.50
201	Dec. 14	Renton to Panther Lake and Auburn	18	Arthur Nation	31	.70
202	Jan. 4	Echo Lake to Ravenna	12	Hazel Burroughs	34	.35
203	Jan. 10	Cowen Park to Pontiac and Ravenna (Moonlight)	4	Kathleen Gorham	20	1111
204	Jan. 18	Portage to Dockton, Vashon Island	10	Olive Rand	108	.50
205	Jan. 25	Newport to Lake Sammamish and Renton	17	A. S. Gist	17	.25
206	Feb. 1	Port Madison to Rolling Bay and Eagle Harbor	8	Celia Shelton		.50
207	Feb. 7	Fauntleroy to South Park (Sat. p. m.)		Winona Bailey	4	
208	Mar. 10	Orchard Beach to Dunlap (Moonlight)		Mary Cutter		-
209	Feb. 15	Echo Lake to Wayne and Juanita	14	Myrtle Culmer		.50
210	Mar. 1	1st Section, Kent to Angle Lake and South Park	16	H. L. Bushnell		.45
		2nd Section, Orillia to Angle Lake and South Park	12	G. A. Stanton.		.35
211	Mar. 15	Appletree Cove to Miller Bay and Suquamish	10	Mrs. E. K. Triol		.50
212	Mar. 21	Cowen Park to Mapleleaf (Sat. p. m.)	5	Edna Burroughs		1
213	Mar. 22	Juanita to Cottage Lake and Forest Park	22	Mary L. Hard		.50
214	Mar. 29	Joint Walk with Everett—Silver Lake to Everett	10	H. B. Hinman		1.30
215	Apr. 10	Washington Park (Moonlight)		Ida Rosencrans		1.00
216	Apr. 11	Smith Cove to West Pt. and Ft. Lawton (Sat. p. m.)	5	H. B. Martin		
217	Apr. 19	Cove to Burton, Vashon Island	-	Mabel Furry		.50
218	Apr. 25	Seward Park (Sat. p. m.)	4	B. J. Otis		.00
219	Apr. 26	Newport to Lake Sammamish and Kirkland		E. B. Stackpole	16	.30
220	May 3	Joint Walk with Tacoma—Lakota to Dash Point		H. C. Belt		.50
221	May 8	Schmitz Park to South Alki (Moonlight)		Helen Criswell		
222	May 9	Taylors Mill to Fairview (Sat. p. m.)	5	Kathryn Rand		0=11-
223		Navy Yard City to McKenna Falls	-	W. H. Rees.		.50
	May 17	19th Ave to Lake Washington Canal (Sat. p. m.)	4 -			
224 225	May 23 May 23-24	Chico to Hidden Ranch and Mt. Baldy		Howard Fuller		1.35
226	May 23-24 May 24	Chico to Hidden Ranch (Rhododendron Walk)	6	Gertrude Streator		.50
		Kingston to Eglon and Pt. Gamble (Chicken Dinner)	11	J. N. Bowman		
227 228	June 7			Susanna Kellett		1.00
	June 5	Kirkland to Northrup (Campfire Walk)	_			
229	June 13	Lake Washington Shore Walk (Sat. p. m.)	7	L. T. Neikirk		4 00
230	June 13-14	Climb of Denny Mountain (Elev. 5,800), Laconia	•	A. Nation, Charles Hazlehurst		3.80
231	Sept. 3	Medina to Bellevue (Moonlight)	_	Charles Albertson H. B. Bennett		.15
232	Sept. 20	Gibson to Creosote, Eagle Harbor	_	Charles Albertson, H. B. Bennett		.70
233	Sept. 27	Sandy B'ch—Egion—Pt. No Pt. (Beefsteak Walk). Special Outings		Clayton Crawford		1.00
16	Feb. 21-23	Scenic Hot Springs.		Local Walks Committee		8.55
17	July 3-5	Hood Canal; Lilliwaup and Idlewild Falls		Local Walks Committee.	74	3.60
18	Sept. 5- 7	The Lodge, Rockdale. Snow Lake and climb of Snoqualmie Mountain (Elev. 6,270)		Local Walks Committee	63	4.00



REGION OF THE 1915 OUTING

Copyright A. H. Denman Mount Rainier from Crescent Mountain Sluiskin Mountains in foreground

THE MOUNTAINEERS

OFFICERS AND TRUSTEES

Edmond S. Meany, president	
George E. Wright, vice-president	402 Burke Bldg.
Charles M. Farrer, secretary	508 Pioneer Bldg.
Horatio C. Belt, treasurer	1002 Alaska Bldg.
Gertrude I. Streator, historian	1726 15th Ave
Chas. Albertson	727 Henry Bldg.
H. B. Bennett	5249 University Blvd.
A. H. Denman	National Bank of Commerce Bldg., Tacoms
Charles Hazlehurst	1020 Seneca St
H. B. Hinman	1612½ Hewitt Ave., Everett
P. M. McGregor	302 Cobb Bldg
R. H. McKee	328 Globe Bldg
L. A. Nelson	430 Henry Bldg.
Lulie Nettleton	

EDITORIAL STAFF

Effie Louise Chapman, editor

Howard A. Fuller, business manager

A. H. Albertson

Helen Gracie

Lulie Nettleton

ST. ANDINGCOMMITTEES

Outing Committee
L. A. Nelson, chairman

Legislative Committee George E. Wright, chairman

Local Walks Committee Charles Hazlehurst, chairman

Membership Committee
Hazel Burroughs, chairman

Entertainment Committee William H. Gorham, chairman

Lodge Committee
Clayton Crawford, chairman

Auditing Committee
E. W. Bond B. J. Otis

MONTHLY MEETINGS

DECEMBER 19, 1913-NOVEMBER 20, 1914

The Mountaineer monthly meetings for the year have been interesting and varied in character. The Program Committee arranged for and successfully presented the following:

DECEMBER 19, 1913

"The geological history of Puget Sound," illustrated lecture, by Professor J. Harlan Bretz, University of Washington.

JANUARY 16, 1914

"European travels," lecture; Judge Thomas Burke, Seattle.

FEBRUARY 27, 1914

"Making an outing," talks by several Mountaineers on different phases of the subject. Stereopticon slides.

MARCH 20, 1914

"Indian legends," Doctor Charles M. Buchanan, agent of the Tulalip Indian Reservation, Wash.

APRIL 17, 1914

"Glacier National Park," illustrated lecture; Mr. J. R. Hoats, Tacoma, Wash.

"The proposed Mount Stuart outing," by Doctor H. B. Hinman, Everett, Wash.

May, June, July, August, no meetings.

SEPTEMBER 18, 1914

Nominations for the Board of Trustees were made. "Cascade climbs," illustrated lecture; Mr. George I. Gavett, University of Washington, Seattle.

"Local walks and the Lodge," talk; Mr. Charles Hazlehurst, Seattle.

OCTOBER 16, 1914

"Mount Stuart outing," illustrated lecture; Doctor H. B. Hinman, Everett, Wash.

NOVEMBER 20, 1914

"Glacier National Park outing," illustrated lecture; Mr. J. H. Weer, Tacoma, Wash.

GERTRUDE INEZ STREATOR, Historian

SECRETARY'S REPORT

The membership of The Mountaineers has increased greatly this year. Including applications pending, the membership numbers 627, as compared with 489 last year. It is divided as follows: Seattle 470, Everett 64, Tacoma 42, Monroe 10, the latter auxiliary having been organized early in the year. The sum total of membership shows the growing love of the out-of-doors among our citizens and the popularity of the club.

The Olympus National monument is still a matter of debate at Washington, and Chief Forester Graves came out this fall to make a personal inspection of the territory comprised in its boundaries.

Our earnest friend and helper, Enos A. Mills, of Estes Park, Colorado, is again journeying to Washington, D. C., to urge the Government to provide a district national park service, or bureau, a matter in which The Mountaineers are vitally interested, the present system being a bad one for the parks.

The varied activities of The Mountaineers are reported elsewhere by the several committees.

CHARLES M. FARRER, Secretary

TREASURER'S REPORT, YEAR ENDING OCTOBER 31, 1914 GENERAL FUND

Receipts

Cash on hand November 1, 1913\$	399.51	
Bonds redeemed	400.00	
Interest on bonds	77.00	
Outing fund	709.17	
Local Walks Committee	135.15	
Stuck lecture	41.00	
Bonds sold	200.00	
Magazines sold	133.75	ec.
Pins sold	10.50	
Fobs sold	3.75	
Dues	1,698.00	
Advertising in Annual, 1913	246.55	
Advertising in Bulletins	63.00	
Advertising in Membership list	16.00	
Advertising in Mt. Stuart prospectus	24.00	
Advertising in Glacier Park prospectus	100.00	
_	_	\$4,257.38
Disbursements		
Reconnaissance (Mt. Rainier)	29.70	
Printing and stationery	47.75	
Mailing and addressing	298.13	
Plates for magazines	1.71	
Bulletins	169.00	
Annual, 1913	558.75	
Pins	25.00	- 1
Refund to branches	100.00	
Accrued interest	8.00	
Bonds	600.00	
Miscellaneous	49.30	
Membership list	25.00	
Stack lecture	20.75	

TREASURER'S REPORT—Continued

IREASURERS REPORT—				
General Fund—Disbursements-		ed		
Mt. Stuart prospectus	61.55			
Assistant Secretary (salary)	190.00			
Pictures and slides	154.50			
Markers on city tower	19 25			
Loaned to Lodge fund				
		\$4,147.04		
			2	110.34
PERMANENT FUNI			•	110.01
Receipts	10.00			
Cash on hand November 1, 1913	\$ 375.78			
New members	219.00			
Interest on savings account	12.67			
Interest on bonds	14.00			
Bonds redeemed	200.00			
		\$ 821.45		
Disbursements		V 022.10		
Bonds purchased	• 600.00			
Premium on bonds.				
Accrued interest on bonds.				
Accrued interest on bonds	4.00	22.4.00		
		614.00		
			\$	207.45
OUTING FUND				
Receipts				
Cash on hand November 1, 1913	\$1,126,27			
Outing, 1914 (Glacier Park)				
Outing, 1914 (Mount Stuart)				
Outing, 1914 (Mount Studit),		\$7.817.02		
Disbursements		\$1,011.02		
Outing, 1913 (Olympic)				
Outing, 1914 (Glacier Park)				
Outing, 1914 (Mount Stuart)				
Transfer to general fund				
Miscellaneous	2.75			
-		7,815.72		
			\$	1.30
LOCAL WALKS FUN	D			
Receipts				
Cash on hand November 1, 1913	.\$ 85.15			
Cash from Treasurer of Local Walks	100.00			
		\$ 185.15		
Disbursements		•		
Transferred to general fund	\$ 135.15			
		135.15		
		100.10	\$	50 00
TODOR TIME			•	00 00
LODGE FUND				
Receipts				
Cash on hand November 1, 1913	•			
Received from subscriptions				
Loaned from general fund	. 1,788.65			
		\$2,775.15		

TREASURER'S REPORT—Continued Lodge Fund—Continued

Disbursements

Expended on Lodge building	\$2	,775.15	2,775.15		
Total balances				\$	369.09
CASH BAL	ANCES		- 1		
National Bank of Commerce	\$	7.14			
Bank for Savings		185.45			
Cash on hand		176.50			
	-		4	2	369.09
ASSET	rs			_	
General fund—Cash on hand	\$	110.34			
General fund-Bonds on hand	1,	108.00			
General fund-Loaned to Lodge fund	1	788.65			
	_		\$3,006.99		
Permanent fund—Cash on hand	\$	207.45			
Permanent fund—Bonds on hand		610.00			
	_		817.45		
Outing fund—Cash on hand	\$	1.30			
	_		1.30		
Local Walks fund—Cash on hand	\$	50.00			
	-	_	50.00		
Audited November 21, 1914				\$ 3	,875.74
H. A. FULLER B. J. OTIS	REDICK	H. McI	KEE, Trea	Bur	er
Auditing Committee					

REPORT ON LOCAL WALKS

The Local Walks Committee submits the following report for the year ending September 30, 1914. There were held thirty-nine walks and three special outings, as follows:

outings, as follows:	Average	Average
	Attendance	Mileage
19 short Sunday walks	98	9.9
6 long Sunday walks	21	18.6
13 Saturday afternoon and moonlight walks	24	3.9
1 climb of Denny Mountain (5.500 ft.)		

The Washington's Birthday Outing, participated in by eighty-five, was held at Scenic Hot Springs, and in spite of inclement, weather, many enjoyed snow-shoeing, skiing, coasting and tramping in the snow-covered mountains.

A special boat was used by our seventy-four members and guests on the Fourth of July outing to Hood Canal. From the camp at Big Beef Harbor, Idlewild and Lilliwaup falls were visited; fine weather made salt water bathing and sleeping out especially enjoyable, and the return journey was broken by a beach supper at Point No Point.

The Labor Day Outing was held at the Lodge by a party of sixty-three members and guests. On Sunday twenty-eight made the ascent of Snoqualmie Mountain, elevation 5,500, via the north side, and a party of eighteen tramped up the beautiful valley of the South Fork of the Snoqualmie River to Snow

Lake. In the evening all enjoyed a jolly program around the big fireplace. Monday, in spite of rain, was utilized by three trail gangs to do some pioneering work, while others "tinkered" around the building.

Mention must be made of the help accorded the Committee at all times by our members. A special boat was chartered for fifteen of the walks, and railroad companies have furnished us special cars when needed. A total of 2,561 persons were present on the walks and outings of the past year.

FINANCIAL STATEMENT Receipts

Newswhen 1 1010 belense on hand		
November 1, 1913, balance on hand		
Received to September 30, 1914	2,4	00.55
Disbursements		
Boat charter and fares	•	
Railroad transportation	499.30	
Coffee	30.00	
Sugar	14.55	
Milk	14.55	
Meat	47.30	
Groceries, fruits and vegetables	104.48	
Cooks and helpers	59.50	
Hotels	542.60	
Chicken dinners	37.00	
Drayage, freight, and packing	19.46	
Telephone, postage, and printing	18.53	
Scouting	23.60	
Committee expense	49.70	
Outfit	5.80	
General fund	100.00	
Total	\$2,352.12	

Respectfully submitted

Balance on hand September 30, 1914....

CHARLES HAZLEHURST, Chairman

- \$2,400.55

Audited October 31, 1914

H. A. FULLER

B. J. OTIS

Auditing Committee

Everett Mountaineers The past year has been the most successful in the work of our branch since its inception.

We now have a membership of 76 and a comfortable balance in the bank of over \$100.

A contribution of \$25 from our treasury was made toward the Lodge Fund, and we have also prepared a set of about 125 lantern slides illustrative of our local walks and climbs.

During the year we have held twenty walks and outings, with an average attendance of twenty-seven. Included in this are a New Year's outing at Index, a two-day outing to Lewis Creek Canyon and Lake Serene, a weak-end at Lake Isabel and the ascent of Mount Si.

Several largely attended lectures have been held in the high school auditorium.

Seven of our members went on the Mount Stuart outing, and one to Glacier National Park.

This year we have "swarmed," six of our members furnishing the nucleus for the formation of a branch at Monroe.

A large factor in the interest in the club is "The Trailers," a social organization meeting every two weeks, to which all Mountaineers, and only Mountaineers, are eligible.

H. B. HINMAN

Tacoma Mountaineers The Mountaineers of Tacoma are a delightfully pleasant little family circle, well acquainted and congenial.

No one local walk stands out conspicuously; all have been well attended and thoroughly enjoyed. The Saturday afternoon walks were new this year and attracted a goodly number. The "mystic" walk of recent date proved that Tacoma Mountaineers walk to be out in the open and to admire nature's beauties, rather than because there is some special attraction as a peak to climb, a chain of lakes to view, or a chicken dinner to entice them hence. A fair proportion of our members have attended the Dedication, Labor and Helping Hand days at the Lodge, and if reports are true have done their share to make it an ideal mountain home.

We note three special outings. The New Year's outing to view Paradise Valley under her seven-foot blanket of snow (some of the party visiting McClure's Rocks) was led by A. H. Denman. The members found the snow-shoeing exhilirating and the evenings about the fireplace at the Inn most charming. The Mount Wow outing with 42 members, including visitors from Seattle and elsewhere, made a two-day trip in May, and reported magnificent view of Mounts Hood, St. Helens and Adams from the top of Wow (6,030 feet), and gave flattering comments on the leadership of J. Harry Weer. In October, Miss Crissie Cameron planned an autumn outing to Rainier National Park. This was led by Mrs. Weer. The members climbed Eagle Peak (5,955 feet).

We were pleased to loan to the summer Outing Committee our president, J. Harry Weer, confident he would give his entire energy to the success of the Glacier National Park outing. Twelve of our members participated in that trip, several joined the Mount Stuart outing, and a few were with the Mazamas in Moraine Park.

On the whole it has been a most satisfactory year. We need no excuse to "hie to the woods and fields, the streams and lakes, on healthful tramps with mind attuned to Nature's myriad charms."

MRS. W. H. UDALL

Monroe

Mountaineers

Perfected March 22, 1914, and since that time we have taken eleven local walks, one being the Fourth of July outing, and climbing of Mount Pilchuck, besides a trip by boat from Everett to Green Bank, to the rhododendron fields. Some of the members have attended and participated in the walks of the Everett branch and have been with the parties at the Lodge.

Dr. H. B. Hinman gave an excellent illustrated lecture on the Olympic outing for the benefit of our branch, which was well received and created considerable enthusiasm.

Since the granting of the petition to organize, three new members have joined us, and there is every reason to believe that during the coming year there will be a substantial additional membership secured.

E. T. BASCOM

SCIENTIFIC NOTES

EDITED BY GERTRUDE I. STREATOR

OUR NATIONAL PARKS

Many of the national parks and monuments contain an array of valuable scientific material not elsewhere found. Being in a national reservation this material is the property of all people, and each of these reservations may be made a great outdoor university.

The study of science in the world outdoors is an unrivalled stimulus to investigation and to education. The book of nature lights the torch of imagination; interests when all other sources fail. Charles Darwin, "the most influential man of the nineteenth century," was a failure as a student until through outdoor rambles he became interested in botany and geology. Continuing his outdoor scientific studies, he at last gave to the world the most illuminating information.

The Grand Canyon of the Colorado is a wonderful geological story and a magnificent illustration of the possibilities of erosion. The Mount Rainier and the Crater Lake national parks are excellent examples of the ways of Mother Nature in world building and world changing.

Between the Big Trees in California and the brave, tiny plant life by the steam vents on Rainier there is a wonderful wealth of botanical lore.

With birds and animals multiplying and becoming easy of study in the national parks, these places are certain greatly to increase the numbers of people who study economic ornithology, biology and zoology.

The development of the scientific possibilities in the national reservations will hasten the general understanding of conservation, the noblest phase of which is the saving of human life and ideals through recreation in scenic places.

ENOS A. MILLS

OUR BIG KELP

The name of the common bulb kelp is Nereocystis luetkeana. (Gk. nereus, a marine god; Gk. kystis, a bladder or hollow bulb. F. P. Lutke was a Russian explorer.)

The plant probably reaches a maximum length of about 125 feet, although about 340 feet are claimed for it. The bulb and the upper hollow part of the stem serve as a float and as a storehouse for the gases used by the plant. The currents usually keep the leaves more or less horizontal from the bulb, and thus near the surface where the light is best. The lower and narrower end of the cattle-whiplike stalk is fastened to the recks by means of a holdfast composed of a tuft of rootlike branches whose ends adhere by a hydraulic cement opting from them.

The place occupied by any ordinary species of plant is very largely a matter of accident, since locomotion is not common, as in animals. However, the bulb kelp is nearly always found on rocks, and thus indicates to launches and small craft the presence of danger. Naturally a gas-filled bulb jerks on its holdfast as it is moved by the waves; thus as the bulb grews the plant is pulled loose unless it is fastened on a rock of considerable dimensions. A large kelp will drag a rock 8 inches in diameter. On sand or mud the kelps will be pulled loose while yet very young. This is the reason why the plants are found on rocks only.

Sea water contains a very small propertion of potash. A few years age it was found that these plants had the power of taking this potash from the water and retaining it in their cells to a remarkable degree. Thus kelp when

dried contains about 15 per cent potash. This is true of many species. Since potash is one of the three chief compounds in fertilizers there is demand for a great deal of it. Since the United States has no considerably supply of potash, we pay Germany \$10,000,000 to \$16,000,000 annually for ours. By far our most promising source of potash lies in the large kelps. The large species are better than the small ones, chiefly because the former grow in water deep enough to fleat harvesting machinery, and thus very greatly leasen the cost of gathering. One could gather material just as good from the rocks on the beach by means of a jack-knife; but the cost of getting it in quantity would be too great.

On the Atlantic coast of the United States there are no large kelps; but on the Pacific coast there are growing 30,000,000 to 50,000,000 toms (wet) of kelp annually. Thus we may look for a considerable industry some time from this source.

T. C. FRYE, University of Washington

CHICKADEE

The winter forest on the University Campus seems coid and silent as I venture into its depths, but I am rewarded by a rhythmic call not far away. I answer as I watch the storm clouds along the horizon through a break in the trees. Suddenly they seem to have been condensed into living form, for there on a vivid maple leaf, inspecting its every angle, is a tiny atom whose gray, black, brown, and white colors match in every shade the masses of vapor behind it. But the joy of life vibrates rapidly in the brown eyes of this little creature whose form bespeaks an attractive bird personality.

Fluttering away to another leaf it crooms a minor melody, which is immediately repeated by a dozen other similar personalities. As I join the chorus they yield to an apparently consuming curiosity, and by devious and winding flights circle around, ever drawing nearer to my spirea. Holding my breath I call "sweet-ee" and there, two feet above my head, a chestnut-backed chickadee looks down into my upturned face and answers, "dee-dee" in the friendliest manner. I call again and hear the reply "chick-a-dee-dee" behind me.

The tree seems alive with mysterious voices whispering soft sayings which my dull ears cannot interpret. Tiny wings flutter all about as the flock advances, and numberless bright eyes peer inquisitively into mine, but usually from behind the shelter of a screening leaf. Gaining confidence from the quiet of all around they inspect the intruder carefully and then make a thorough means for food with an absolute disregard for the attraction of gravitation. They hang head downward as if that were the regular method of procedure. They swing from twig to leaf, catching by their toes with the ease of a professional gymnast. They poke their inquisitive little noses into every crack and cranny of the tree, and their puffy little bodies give evidence that the hunting is good.

They are neighborly little fellows and mingle fraternally with several bush-tits and golden-crowned kinglets that drop into the same tree, seeming to understand and answer by funny little squeaks the calls of the newcomers. Even the vituperation of a pair of Seattle wrens, who came fussing out from an old stump to scold at them, does not disturb their serenity, but when a stray Steller jay flew into the tree, in a flash the clouds and I were alone together.

ADELAIDE L. POLLOCK



MOUNTAINEERING TERMS

In this technical age every science, business, and sport has its own nomenclature. Mountaineering, the king of sports, stands not apart in this respect.

Although a full mountaineering vocabulary would closely interlock with botany, geology, and meteorology, nevertheless there are some terms which in their literary use distinctively belong to this activity. For the assistance of both those who read and write about the great out-doors, the following list is submitted:

Aiguille—a needle-shaped peak; a sharp rocky mountain summit, especially one of those of the Italian Alps near Mont Blanc

Aiguillesque-shaped like, or somewhat like, a needle

Arête-narrow ridge of rock

Bergschrund-crevasse at break of snow from rock

Bifurcation—a point at which forking occurs; one or both of the bifurcating parts

Bole-the trank of a tree

Boss-protruding rock in glacial bed

Breccia—rock composed of angular fragments imbedded in softer formation

Chine—a deep and narrow ravine or fissure

Cirque—an amphitheatre-like valley head

Couloir-ascending gorge or gully, especially near mountain summit

Diastrophism—the process, in general, of deformation of the earth's crust producing continents and ocean-beds, plateaus, mountains, valleys, folds, and faults

Escarpment—a steep slope, especially if of considerable lateral extent

Fumarole—a small hole from which volcanic vapors issue

Glacis—a gentle slope, or a smooth, gently sloping declivity

Glissade—act of sliding; a slide; to slide (rare)

Lapelle-that which is turned back or folded over

Magma—the molten mass within the earth's crust, the source of igneous eruptions

Massif—the dominant, central mass of a mountain ridge more or less defined by longitudinal or transverse valleys

Mauvaises terres—bad lands

Moulin—a nearly vertical shaft or cavity worn in a glacier by the running down of water

Moraine—the débris of earth and rocks collected in ridges or heaps by a glacier; medial, terminal, recessional, lateral

Névé—the granular snow-ice before the formation into solid glacial ice Névé-fields—glacier snow-fields

Pressure-ridge—heaped-up crushed ice along a line of weakness in an ice floe, the result of lateral pressure of the ice

Scoria—coarsely cellular lava or fragments of lava; often in the plural

Scree—a pebble, a stone; also a heap of stones or rocky débris; talus

Sérac—a pinnacle of ice among the crevasses of a glacier; also, one of the angular blocks into which a glacier breaks on a steep grade

Sierra-saw-tooth ridge

Talus-sloping mass of rock fragments

E. W. ALLEN



NOTES ON PACIFIC COAST MOUNTAIN CLUBS EDITED BY MARION D. THUM

The Mazamas established a new record on Mount Rainier, With the taking to its summit the largest party that has ever stood Mesamas, 1914 on that crest at one time. Seventy-five began the climb and seventy-one reached the summit. George X. Riddell and A. Boyd Williams mapped out the trail over the Winthrop Glacier. The trip took two days. Going from permanent camp Sunday morning, the camp was made at an elevation of 9,500 feet on the rocks of Steamboat Prow, and on the following morning began the final ascent. They reached the summit at 11:35 in the morning. They were divided into nine companies, the members of each company being roped together. The most exciting incident of the climb was when a snow bridge over a crevasse caved just as the last two in the party headed by John A. Lee were crossing. Only the presence of mind of the members of the company and the prompt action of those who had reached firm ground saved the whole party from being plunged into the crevasse.

Sierra Club OutIng to Yosemite

National Park
The 1914 outing of the Sierra Club was a repetition of the club's favorite trip through the Yosemite National Park.

The main party left San Francisco and Los Angeles, respectively, in special trains on the evening of July 1, arriving in Yosemite Valley the following morning. Here they joined the advance party, which had enjoyed a two weeks' stay in the valley.

From Yosemite Valley the main outing party, two hundred and thirty in number, proceeded to the upper Merced basin, where four days were spent in camp near Lake Merced. From this camp a knapsack party climbed Forster Peak (12,062 feet) and another knapsack party traveled through the headwaters of the San Joaquin and Tuolumne rivers to Tuolumne Meadows, climbing Mount Ritter (13,156 feet) en route. The main party reached Tuolumne Meadows by crossing Tuolumne Pass and descending Rafferty Creek. A delightful stay of ten days was made in the meadows and climbs of Mount Dana (13,050 feet), Mount Lyell (13,090 feet), Mount Conness (12,556 feet), and other peaks were made.

From Tuolumne Meadows the party traveled to Conness Creek at the head of the Grand Canyon of the Tuolumne, stopping a day to allow everyone to visit the famous cascades and waterwheels. From this camp the main party traveled by way of Matterhorn Canyon, Rodgers Lake, Pleasant Valley, and Rancheria Mountain to Hetch Hetchy Valley. During this time several knapsack parties made the descent of the wonderful Tuolumne Canyon, some of them returning to the main party at Pleasant Valley and others in Hetch Hetchy Valley. Another knapsack party visited Lakes Vernon and Eleanor.

After spending two days in Hetch Hetchy Valley, another two days' travel brought the party to the railroad at El Portal in time to leave for home on the evening of July 29.

Next year the Club plans to vary its usual program by conducting a permanent camp for three months on the "Soda Springs" property which it recently acquired in Tuolumne Meadows. A pack-train will make regular trips from Yosemite Valley to the camp. It is hoped that this camp will not only be enjoyed by the members of the Club but that it will help to make the wonderful mountain region of the upper Yosemite National Park accessible to many of the thousands of people who will visit Yosemite Valley next

year. The Soda Springs property is located in the center of Tuolumne Meadows, one of the grandest camp spots in all of the High Sierra. From it the interesting Mono Lake region is easily reached either via Leevining Canyon or Mono Pass. Mount Lyell, Mount Dana, Mount Conness, Kuna Crest, Unicorn Peak, and Cathedral Peak are also within short distances.

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