# The Sierra



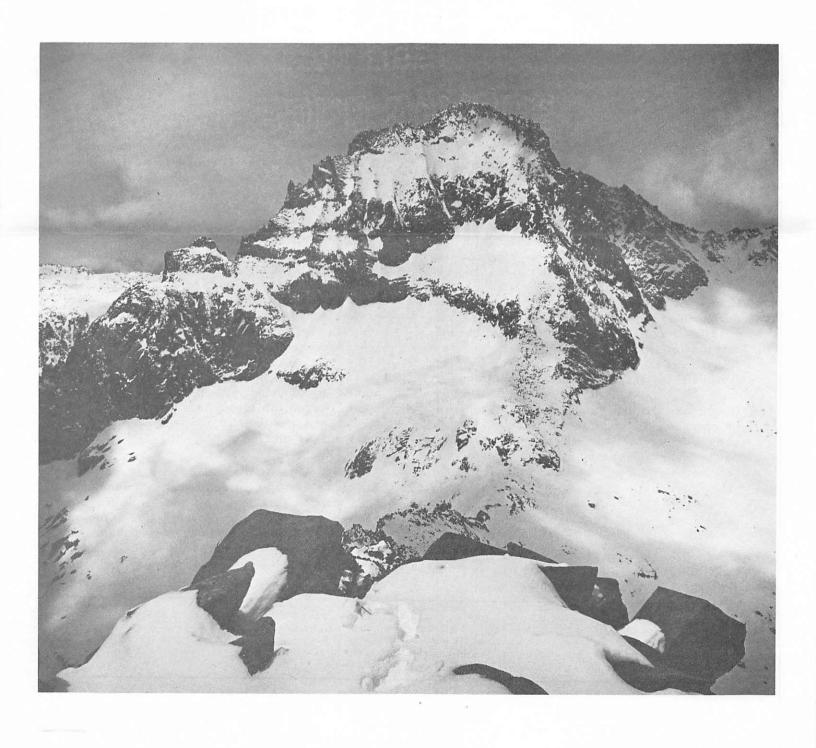
ECHO

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### NEWS

### COVER PHOTO

This beautiful winter shot of Bear Creek Spire was taken by John Arden from the southwest ridge of Peak 12,866' on May 30, 1971. See the story on page 4 of a more recent climb of Bear Creek Spire this May.

### WILDERNESS PERMITS

The Forest Service Headquarters of Inyo National Forest asks that you obtain your Wilderness Permits for areas south of Big Pine from the Ranger Station in Lone Pine. The John Muir Wilderness goes as far north as Mammoth. Permits for areas north of Big Pine should be gotten either from Bishop or Mammoth. Beginning with Memorial Day weekend, the Inyo National Forest Headquarters in Bishop will be open 7 days a week and will remain open until 8:00 PM Friday and Saturday nights (for obtaining Wilderness Permits).

### NEW EMBLEM HOLDER

Congratulations to the latest in a long line of distinguished people. ED HILL is our newest emblem earner.

### ADDRESS CHANGES

DIANA DEE, c/o R & D Associates, P O Box 3580, Santa Monica, Cal 90403 BILL HOOVER - new telephone (415) 447-6828

### REMINDER

Bring your upcoming trips for the winter schedule to the July SPS meeting for John Robinson, Schedule Chairman.

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## CHAIRMAN'S CORNER

There will probably be more people in the Sierra this year than ever before, and that is a trend, not an exception. That is also the reason for increasing rules, regulations, and such pesky items, which mountaineers are known to like about as much as crowds. Maybe we can do ourselves some good and help minimize the nuisances. Besides the usual approaches and climbing routes, there frequently are less-traveled ways with little appeal to non-climbers. The Tinemaha Canyon approach described by Ed Treacy in the last ECHO is a good example. Climbers often wander into such places, sometimes even on purpose. They offer us many advantages as a response to increasing use of the mountains, and we probably should use them more for our outings. If you have some good suggestions along these lines, pass them on to our Schedule Chairman for future use.

Speaking of rules, the Management Committee recently adopted a couple:

- 1 Leaders of SPS trips must be SPS members.
- 2 Leaders of restricted trips must be on the Mountaineers List.

These don't differ much from past practice. They are intended to provide us with better control of our trips and help avoid complications, and they are not expected to be oppressive to anyone. Any opinions on these will be welcome.

# **ASCENTS**

MT MORRISON, BLOODY MTN, May 13-14 . . . . Roy Magnuson, Art de Goede

Eleven climbers met at Convict Lake on Saturday morning for the climb of Morrison. The route chosen was south to a point east of the peak, up a series of chutes until we reached the east ridge which led directly to the summit. Most of the route was dry, which was quite fortunate since the warm weather made the snow very soft. After a leisurely lunch on the summit, we returned via approximately the same route after a planned return by the hanging valley route was ruled out due to the soft snow. We were back at the cars in ample time for a refreshing dip in Hot Creek. Most of us camped at Sherwin Creek Campgrounds on Saturday evening.

When we reassembled on Sunday we had lost 3 and gained 3 so once again we had 11 climbers for the climb of Bloody. The long 12 mile, 5,300 foot gain trip that we expected turned out to be a short 3 mile, 3,300 foot gain trip as we were able to drive up a mine road above Laurel Lakes to about the 9,700' level putting us at the northwest base of the peak. From that point we climbed to the north ridge via a tedious scree slope and followed the ridge to the summit. Round trip from the cars was about 4 1/2 hours. The weather was ideal on both days offering excellent summit views.

The "etcetera" included Mts Perkins (12,591'), Wynne (13,179'), and Pinchot (13,495'), a combination that some felt wasn't possible in two days. Well, it still hasn't been done, but some of us believe it can be. All you need is weather: we had lots of it, but the wrong kind. The first ill omen was the Friday afternoon closure of the Tioga Road, snowed shut. With it went one of the leaders, four other climbers, and a vital 4-wheel drive Toyota. Rain and snow at the roadhead after that should have told us something, but the SPS is tenacious if nothing else.

By 7:00 AM Saturday 15 climbers had found the roadhead. This is reached from old Route 395 just north of the Sawmill Campground. Take the Division Creek Power House paved road past the power house, 2 miles on a dirt road, then choose the right hand fork .6 mile to the Scotty Springs trailhead. The roadhead is dry, but there is usually a creek about .5 mile down the left fork. From Scotty Springs an abandoned mining road goes an extra 2,600' up the mountain. It takes a small 4-wheel drive, a determined driver, and some help rolling rocks, but Gordon Ruser provided the first two and four other tigers headed for Colosseum moved the rocks. The other ten climbers walked up later, since they weren't after the extra mountain: we thank them.

The fast/first five left Gordon's IH Scout in lowering weather and bombed up Armstrong Canyon to a nice dry campsite at 10,000', then on up to another at 10,400' where the tents went up in a rising wind. Up to this point in the canyon, both sides of the central hogback moraines provide a decent route, as long as it looks good at the lower end; we held south to about 9,800', then crossed to the north. The push from camp to the crest was done in crampons and a near-white-out, where 60 mph winds and a blizzard/snow plume awaited. The route from there was obscure and the return route even more so: the party retreated. Dinner for 6 at the upper camp was cooked in the tents; only 15 minutes below, a campfire was practical. In any case, spring snow and a stove provide the only water.

The next morning saw poorer weather than the preceding morning - and it always gets worse in the afternoon, right? Seven stalwarts decided to try for Perkins anyway, following a north-westerly route to the crest north of the peak. They were certain of high winds, and the watching support party saw the clouds thicken for two hours. But the wind wasn't there and the clouds blew away: the watching tigers played "kick-me". The climbers returned down the snow-filled slopes from the pass south of Mt Perkins to report that the ridge looked fierce but went Class 2 with careful route finding. For anyone with access to a 4-wheel drive, this may be led as a grudge match next spring: for the leaders, this was the second snowed-out attempt.

BEAR CREEK SPIRE, May 27-29 . . . . . . . . . Tom Cardina, Howard Stephens

Fourteen eager climbers appeared at the Mosquito Flat roadhead of Rock Creek for an unusual, for SPS trips, backpack of 2 miles and 300 feet gain to basecamp at Long Lake in Little Lakes Valley. We took time to set up tents and pack summit packs before leaving for Bear Creek Spire. We followed the snow covered trail to Gem Lakes then up the snow to Dade Lake and from there we ascended the steep snowfield below the crest. It was of good quality and easy, though strenuous, to climb. We arrived at the crest, dropped our packs and ice axes and proceeded up to the 3rd class summit block. Everyone made it by squeezing thru a tight, for some, chimney. Almost everyone also ascended the isolated summit pinnacle for a fantastic view from Darwin & Goddard to Banner & Ritter. The weather was exceptional, warm and sunny. We all then got in a bit of 3rd class rock practice coming off the summit under the eyes of Dan Eaton who was signing people off the Mountaineers List. We then descended the steep snow with some glissade and ice axe practice and arrived back at camp at 7:30 PM. At the campfire that nite it was decided to make an attempt at Mt Mills on Sunday AM.

We left camp at 8 AM under Howard Stephens' leadership, up a couloir behind camp over into a higher one and finally arrived at Mills Lake. Here Dan Eaton spied a lofty beckoning pinnacle above the lake to the north and signed himself off to climb it solo. The rest of us headed for Mills. It was decided to try a new route up. We approached a series of pinnacles to the east of Mills and worked our way up a series of high 3rd class rocks to the summit of the highest

### Bear Creek Spire, continued

pinnacle only to find a wide gulf between it and the summit plateau of Mills. Since it was getting late and clouds were gathering the climb was aborted. We did feel this was a first ascent of the pinnacle and left a cairn on the high point. We then started down only to find the route would not go due to sharp dropoffs below. So we climbed back up to the original route and then descended. Due to several slow climbers who found the 3rd class rock a bit too much we were very late in getting down and the last of the party arrived in camp at 9 PM with flashlights.

Monday AM everyone slept late and then packed out to the cars by 11 AM. The leaders felt that even though we did not make the peak of Mills it provided a good test for everyone on 3rd class rock and snow, and was really a good exercise for everyone in route finding.

Dan Eaton made his summit and found a cairn in place. He said it was a good climb and the view was beautiful. He returned to camp long before the balance of the party.

### PRIVATE CLIMBS

I left the Tinemaha Creek roadhead on the morning of May 13th and this was my 3rd trip up Tinemaha Creek this spring. At the beaver ponds this time I noticed new tracks from the beavers, it seems they are coming back since the fire in the aspen grove. I backpacked to a flat meadow campsite at 10,600', below the Bolton Brown moraine. It was very mild at night and no wind.

Sunday morning at 6 AM I left camp and went up the north fork of Tinemaha Creek and on the way to the crest I climbed a small peak (12,850') and named it Moraine Peak. It was a first ascent. I continued on to the crest and climbed Palisade Creek Peak and East Palisade Creek Peak and headed southeast over Class 2-3 ridgeline to the summit of Peak 13,500+. It was a first ascent! I named it Dragons Back Peak for the ragged east ridge. It starts from 10,600' and goes to 13,500. It is a series of spires and deep notches. A very ragged and difficult ridge to climb if anyone ever went that way. Beautiful cumulus were building up all around and showers were falling in the distance to the west. I built a cairn and left a register. Yes, Tinemaha Creek is bleak for lack of pines and firs, but its rugged walls and small glaciers more than make up for the lack of timber in the canyon. I arrived at my truck just at dark.

"HUNDRED PEAKING IN THE NORTHERN SIERRAS" May 22-26 . . . . . Diana Dee (with apologies to Andy Smatko)

"Hundred-peakers" have a reputation for enjoying walking on manzanita, driving as close as possible to the peak armed only with an obsolete Forest Service map, climbing only 2000 to 3000 feet per peak (or less), and driving up very rough dirt roads. (The last is enjoyed by "desert-peakers" too.) If these are the things you like your climbing adventures to include, why, the northernmost peaks on "the list" are just for you!

I left Portland, Oregon, on May 21st (thereby dissolving the Portland section of the SPS) and met a friend, Rich Wolf, in Chilcoot at noon on the 22nd. Wanting to climb Adams Peak that afternoon, we drove toward Frenchman Reservoir, then up road 24N01 to its junction with 24N01B. The intersection looked totally different from the way I remembered it (having been there last October); but of course I knew where the trail was. So we parked at the intersection, and set off up an old, impassible road just south of 24N01B. The climb was uneventful, except for an hour spent hacking our way upward through two hundred vertical feet of manzanita. After that, even the slushy snow didn't give us "wet feet". My dog Yoko, Rich, and I enjoyed a registerless view from the benchmarked summit. I climbed the other peak 0.3 miles to the east, which

### Northern Sierras, continued

looked equally high, and then we headed down. Since I tried to find a better route, we ended up losing four hundred feet through the bushes. Then we discovered the end of road 24N44 (shown, unlabeled, on the 1960 Forest Service map), which ended at the intersection and the car. (So we could have driven much closer!)

Intent on climbing Mt Elwell the next morning, we drove over to Greagle, then up the Gold Lake road, marked with a sign reading "Gray Eagle Lodge 5 mi". About a mile up the road we crossed a large new graded dirt road which we ignored since it was not on our map. Four miles later we came to a broken "Gray Eagle Lodge" sign marking the dirt road on the topo, where we camped for the night. The next morning we braved the rough dirt road, only to find that after a mile it - guess what - crossed that nice new graded road! A half mile more brought us to the lodge. Rich wanted to take a nap, so Yoko and I climbed the peak via the Long Lake trail. Another snow ascent brought us to the summit - once again registerless. After enjoying the fine view of Sierra Buttes and noticing that the Gold Lake road was impassible due to snow, we headed back to the car. Needless to say, we returned to Highway 89 via the new road.

Our next goal was Haskell Peak, so we drove to the road shown on the Forest Service map which starts on Highway 49 two miles west of the junction of 89 and 49. We got the car to 6400', about 2 1/2 miles east of the peak, before we were stopped by a fallen log. (If that hadn't stopped us, the snow would have; the snow level is too low at this time of year to make these peaks more of the "drive-ups" that they are.) Believing that we had only 2 1/2 miles and 1600' of gain to do, Rich decided to come with me this time. But it was more like four miles because the road wound around to the north of the peak (not to the south as shown on the Forest Service map - and it connects to Gold Lake!) In spite of the detour, we made the summit by 5 PM, giving Rich his third "Sierra Peak" and Yoko her seventh (!). Unfortunately, Rich developed knee trouble on the way down. So that night he and Yoko left for LA via Hot Creek.

Early May 24th I drove over to Sierra City, and turned off onto a road marked "Sierra Buttes Road 5 mi". After about 1 1/2 miles the road became extremely rough, steep, and rocky. Being foolish and determined, I pressed on, barely making it to the fork in the road at 6500'. By that time I was tired of being scared, and besides - here at last was a place I could turn the car around! The first half mile was a pleasant walk along the road made muddy by snow melt. Then I came to the intersection of the jeep trail, and started walking up it towards the peak, in spite of the sign that said "4 wheel drive vehicles only". Soon thereafter the trail disappeared under the snow, so I simply headed straight for the summit, which is crowned by a fire lookout tower. I picked up the trail just below the ridge to the left of the peak, and followed it to its end. The last 200 feet was Class 2 requiring gloves - one hundred thirty-nine metal stairs with freezing-cold metal hand-rails. But, oh! what a spectacular summit - by far the best of the four I had done so far. The views were simply magnificent. I ate a leisurely lunch, descended the stairs (it pays to have small feet!), had a fun walk back to the car, and very carefully drove back down to Sierra City.

I had intended to climb English Mtn and Mt Lola next, but I didn't think the roads would be free of snow. So I spent the rest of the 24th making a leisurely drive over to the Mt Rose Ski Area, where I camped for the night. The next morning, from the dirt lot across from the ski area entrance (about 8200'), I dropped about 200' into the valley and found a telephone pole line. with a road running underneath it. This road is the best route up to about 8400' where the poles and the way you want to go diverge. Because of the snow, I didn't find the trail until I hit the ridge west of the summit. The peak has a register, but the view was not so good, partially because of the haze. The trip back to the car was equally uninteresting, except that I lost my sweater. Driving back towards Lake Tahoe, about 0.3 mi south of "Mt Rose Summit", I saw a sign reading "Mt Rose 3.5 mi". But I think my way was better, expecially since the trail was obscured by snow.

That night I slept at Kit Carson Campground, 1 1/2 miles east of the western junction of 88 and 89. I had tried to drive up the Trout Creek road, which would have put me closer to Freel Peak, but the road did not go beyond Saxon Creek. So I resigned myself to the long walk up Willow Creek. I started at the first curve in the road, about 1 mile north of the junction, and after

# Northern Sierras, continued

climbing over a fence was rewarded by almost immediately finding a trail. I left the trail at Willow Creek, climbed to the left above its canyon, and upon reaching the slushy meadow at about 8100', I found the slushy trail again. A pleasant sand and slippery-snow climb directly up from Horse Meadow brought me to the summit, with no second class moves anywhere. One can see many miles in all directions from this peak, as evidenced by the fact that a relay station has been placed there. I signed a matchbook in the register tube (since there was no booklet), let my shirt dry in the sun, took a picture of Lake Tahoe, watched the thousands of mayfly-like creatures flitting about the relay tower, then headed on down for the long walk out.

Very satisfied with my adventures of the previous five days, I drove on over to Mt Shasta City (via Highways 44 and 89 - my favorite road!!) to meet Dennis Lantz for a climb of the volcano.

Dennis Lantz MT SHASTA (14,162') May 28-29 . .

The allure of Mt Shasta to the SPS is natural, as outside of the Sierra only it and White Mtn are both in California and over 14,000', making it part of a "set" for peakbaggers. As a drawback, however, it is over 600 miles away, a 6th Class drive for two day weekends. Continental Trailways will get you to the town of Mt Shasta for \$20.44; if you're lucky, Diana Dee will be climbing in the area, meet you in town, and drive to the roadhead. maintains a climber log, and will begin a search for the body if you don't check in again; registering there is a good precaution. The Forest Service provides some route description and late weather forecasts; that helps too.

The roadheads suggested in the Forest Service leaflet are Sand Flat and Bunny Flat, both at about 7,000'. Doubting SPS map students will discover that the parking lot at the base of the ski lift is 7,850' and about two miles closer to the peak. Diana had been in Oregon long enough to be a member of the Mazamas (dual citizenship?) and Shasta is on their "List", so they coached her on this route improvement. Assuming a spring climb and decent snow, the best route circles the eastern slopes of the ski bowl, initially up the rope tow route, gaining elevation At the head of the bowl, about 20° east of a true North line from the upper tower of the chair lift, the route crosses the ridge above the bowl near 10,000'. From here, traverse a near-trail through the crud on the ridge northerly to the rising floor of the next basin. (This is the valley that reaches out to Sand Flat and Bunny Flat.) You can now either turn west to "Helen Lake", a small flat snowfield at about 10,400', or go north to a small bench at about 10,800'. We elected the bench, since water is melted snow in either case.

We were unexpectedly joined here by Myron Rosenberg, an almost-SPSer, and Pepper, a lady German Shepherd. He cast their lot with our dawn start for the summit. We awoke to returning climbers, bound first for sunrise on the summit, but turned back by high winds. mile round trip increases your climbing resolve, however, so we set off up Avalanche Gulch, cramponing past the small slab avalanche tracks. Bear to the right on this route, aiming for the right end of the "Red Banks" rock formation, which is easy to pass through. features a steep snow/ice wall: next time, perhaps. The route now bears north-northwest -Mt Shastina is to the left - and after gentle slopes, north-northeast up Misery Hill. For us, this was a solid walk in a solid 40-50 mph wind; the name was earned in summer climbs, for it's a loose pumice slope. Depending on wind direction, there may be a wind shelter just over the crest of this hill.

From this point, a windswept ridge leads on northerly to the summit plateau, to the left past the summit blocks, then right and up to the summit ridge. Gusts of some 70 mph blew frost crystals in our faces on the icy ridge as we backtracked south to the summit. A little dip in the ridge provided some shelter for rest and a bite to eat and is the location of the register. at the low point and about two feet east of the ridge line.

It's easy to see why dogs aren't invited on SPS trips: Pepper was first on the summit, didn't seem to mind the wind, has built-in crampons, didn't rope up, and traveled without an ice axe. It's demoralizing. For sybaritic Shasta climbers who have gone beyond Wylers in their search for drink, the return trip can be a delight. The wineries north of San Francisco are so close 'tis a shame not to stop and let them talk you into a sample glass or two -----.

3:30 AM, a near-freezing wind whistling around (and through) the hut, a brilliant, star-studded night with a waning quarter moon, and chilled bodies ready to slowly start up a steep slope toward the summit. This could be North America or Europe, in any one of many ranges, on any summer weekend.

But it isn't. This is Easter in the tropics, on the island of Borneo just 6° north of the equator. This is the Panar Laban hut, at 11,000 ft on Mt Kinabalu, the highest peak in southeast Asia. And now we were going for the summit.

Already it had been an adventure. Just getting here was a tale in itself. From Miri to Kota Kinabalu, the town closest to the peak, is only 200 miles, but it had taken us (7 students from my school and myself) two days to get here. A truck ride to Brunei, a boat ride to Lawas and another to Merapok, a 1-mile walk through the jungle across the Sarawak-Sabah border, a Land Rover to Sipitang and on to Beaufort, and finally a train ride to KK. If you find it hard to find these towns on a map, just try to find the routes between them! And with all this were 6 (count them, 6) stations for passport checks, police, customs, immigration and the like.

Next time, try the plane!

But we were not there yet! We had been clever enough to make reservations with the Park Warden for places to stay at Park Headquarters and at the hut, and for the required guide, but we had not chartered a Land Rover to get there. And this day was a holiday! So off we went, down the street, stopping at every Land Rover to see if its driver would take us. Finally we found one who would - after he unloaded all of his cabbages.

Then we were off in a swirl of dust and cabbage leaves. We didn't get to see the peak on the way - it was wrapped in clouds threatening rain like it is every afternoon - nor did we care. The road was enough to make us all glassy-eyed. It is a worthy companion to the Mineral King road - the fact that it took 4 hours to go 48 miles should give you the general idea.

That night was 58° with a light rain. The air was cool and clean. I found it all very delightful, a refreshing change from the last few months. My students were all cold and thought I was mad. The next day was a good old-fashioned backpack, from 6000 ft up to 11,000 ft along a muddy path with hundreds of log stairs. It wasn't too comfortable but the jungle path would have been a complete mudhole without them. We had to carry food and kerosene, but fortunately the rented sleeping bags were already at the hut. Every little bit helps.

At the hut we were almost above the cloudline and got our first real look at the great granite faces and spires of the peak. There was also the usual spectacular sunset. Now it was down to about  $40^{\circ}$ , and my kids were nearly frozen solid, remaining thawed out enough only to ask if I were cold, is this what winter is like, and did I really <u>like</u> this type of climate?

Then the final ascent the next morning, with the helpful moonlight, the Southern Cross blazing low in the south, and the sky lightening in the east. Now we could really see the complexity of the summit. It is a huge U-shaped granite massif, with dozens of challenging subpeaks and spires - enough to keep a bunch of rockclimbers busy for days, or even weeks. A few groups, mainly British Commonwealth armed forces, have been here and pioneered some routes, but most of it remains untouched because no one has ever bothered. If I can find some other rockclimbers here, I would like to come back and play with the mountain a little more.

It was like being in the Sierra again! Tramping over smooth granite slabs and scrambling up big blocks toward the summit on a crisp, clear morning. Seeing the sun finally pop up over the horizon and warm up everything with bright rays, and looking out over the nearby peaks and valleys, and even watching the shadow of the mountain reaching out far to the west over the coast and the sea. This is a real mountain and it really felt good to be on it. And it was a real surprise and delight to find it here.

### Mt Kinabalu, continued



This picture shows Kinabalu from the roadhead at 6000'. The true summit is (as usual) not visible, but is behind the high lumps in the center. You can also see the cablecar (no riders) that supplies the radio transmitters at 7000'.

Having successfully climbed Mt Abbot last year, I was anxious to try another Class 3 emblem peak this summer, so I selected Mt Darwin. My climbing partner and I drove to the roadhead at North Lake on Saturday morning. The basically 1948 topo map of this area shows a trail going only as far as Grass Lake, but the trail does go up to Lower and Upper Lamarck Lakes, as we expected. The trail does continue from the upper lake but rather indistinctly and has to be followed with care, keeping in mind that one is aiming for the easy grade leading to Lamarck Col, rather than the steep faces behind Lamarck Glacier. Soon the trail becomes very distinct again as it switchbacks up the mountainside to the gentle valley leading to the col, where we camped the night.

Next morning we went over the col and down across Darwin Canyon and up the Darwin Glacier. Here we studied the mountain and the Climber's Guide, finding the notch to aim for on the ridge leading to the summit plateau. We then crossed the glacier, having first put on crampons. We stayed in the steep snow chute leading up to the notch, which became rather icy toward the top, so we had to use the points of our crampons to make the ascent. Once at the notch we left the ice axes and crampons and headed up the rock ledges to the top of the ridge. The ridge traverse is fairly easy except for one rather exposed notch near the plateau, which is the reason I suppose this is a Class 3 route. We made the summit marker on the broad summit plateau by midday. Time was short, so we just glanced at the peculiar looking rocky pinnacle, which is actually the highest point, before leaving. Down the chute we took to the rocks at the side, which proved to be easier than the snow chute, so I should think this is the correct way to go. We followed the same route on the way out, up the boulder-strewn Lamarck Col, which I found to be very laborious. I found a ducked route at first but lost it among the rocks. Once down at camp we hiked briskly past the Lamarck Lakes to arrive at the car about 5 PM, a good climb in excellent weather, fortunately.

THE FOLLOWING ARTICLES ON HYPOTHERMIA SEEM OUT OF PLACE THIS TIME OF YEAR, BUT THE DANGER EXISTS ALL YEAR ROUND. THE FIRST ARTICLE IS TAKEN FROM THE SIERRA CLUB'S LOMA PRIETAN, DECEMBER 1971 - THE SECOND ARTICLE FROM THE BAY CHAPTER YODELER, DECEMBER 1971.

# Here is the word on hypothermia

Thanks to Dr. Wheat for the following article on Hypothermia. Please read it carefully and then clip it and save it. Show it to friends who participate in outdoor activities, or give them a copy—Ralph Johnson, chairman, chapter activities committee.

### By Dr. Richard P. Wheat

The term Hypothermia has only recently come into the vocabulary of mountaineers. The older and still valid names of Exposure and Exhaustion are part but not quite the whole story of Hypothermia.

Exposure to the hiker and climber means to be exposed to extremes of temperature, wind, rain, ice and snow, altitude, etc. It is that condition in which a human is subjected to severe stress by the elements.

Exhaustion is that form of stress which relates to fatigue, dehydration and salt depletion, starvation and frequently is complicated by debilitating fear and panic. The net result of exposure and exhaustion is hypothermia.

Kapid mental and physical collapse is accompanied by the crucial addition of cold. With progressive loss of body heat via all routes of radiation, conduction, evaporation and particularly by wind and water chill, the body's "inner core" cools rapidly and without immediate and intensive care leads to death. Taken together, exposure, exhaustion and hypothermia are the chief killers of outdoorsmen today.

Although the term may be new, the condition is as old as man. Californians have been suffering (and dying) from hypothermia since the days Jedediah Smith, the Walker party and Fremont made winter crossings of the Sierra in the early 19th century. The Donner party of 1846 was a prize example.

Our recent tragedies on Mt. Ritter and with the Outward Bound group in the Cascades, as well as such examples of near tragedies as Ship Rock and Mt. McKinley, lend urgency to the need for increased understanding and the early recognition of this mountain triad.

The primary defense is to recognize and effectively forestall hypothermia. This means constantly protecting the warmth and energy of our very fragile bodies. The combination of cold, wind and wetness must be avoided at all costs and if it occurs, terminated at once.

Wind and water chill must be clearly understood since most deaths due to hypothermia occur well above freezing temperature. For example, a  $20^{\circ}$  temperature in a 40 mph wind is roughly the same as  $-40^{\circ}$  with no wind. Although at  $50^{\circ}$  one may not be uncomfortable when dry, you are in deadly peril if wet to the skin.

It means remembering that wool is the only fabric or insulation that remains warm when wet, that waterproof garments are put on before rain strikes and that shelter must be taken early before energy is gone and cold and exhaustion have taken hold. Sufficient food must be available and eaten and water in volume must be taken to sustain the increased need of heavy exertion. The confidence that comes with knowledge, the willingness to turn back, never hiking alone, paying close attention to weather—all these help reduce the fear and panic that may destroy one's chance for survival.

Hypothermia symptoms are not hard to spot. It begins with shivering, uncontrolled shivering. The heart rate increases and breathing becomes rapid; speech becomes slurred, the gait stumbling, mental processes numbed, and the victim is increasingly drowsy. With rest there is no relief. When the body feels cold to touch everywhere and shivering stops, the core temperature has fallen into the mid-80s and death is near.

The second defense is treatment. Prompt, immediate and aggressive treatment. All efforts to warm the victim must be initiated immediately. He must be removed from wind and rain and all wet clothing removed. Examination for injury must be done with care since in the shocklike state he may not recall events and pain sensitivity is low.

Rapid evacuation from the scene may lead to irreversible shock, hence it is best to wait several hours after treatment has begun if possible. If semiconscious (or unconscious) every effort should be taken to keep him awake and to warm the entire body quickly. A fire, hot water and heated clothing and particularly human heat are urgent. He should be placed, stripped, in a warm dry sleeping bag and one or two rescuers, also stripped, should rest against the patient. "Skin to skin" warms most quickly.

If the victim is only mildly impaired, fluid replacement with small frequent sips of warm soup or broth, a complete change to warm, dry clothes followed by warming in a dry sleeping bag should restore the body quickly to a normal state. Replacement of nutrition with small portions of high energy and easily digested foods is also vital.

John Muir is reported to have said of the Donner party: "They were not good mountaineers. The whole winter could have been spent delightfully in so beautiful a spot." What he is saying is that the thinking man survives! We must never forget that mountains, so beautiful and benign, can unleash all the destructive powers of nature on the unprepared and unwary. It is not beyond any of us to enjoy the majesty and grandeur of nature if we think prevention, stay alert and go prepared.

# Hypothermia...and what you can do about it

Several months ago the Yodeler reported the deaths of four climbers on Mt. Ritter from hypothermia (more usually called exposure.) Many readers have written asking for more information. The following is reprinted from a pamphlet by Jim Lawless, producer of a movie on the subject, called "By Nature's Rules."

### —COLD KILLS IN TWO DISTINCT STEPS——

### STEP ONE: EXPOSURE AND EXHAUSTION

The moment your body begins to *lose beat* faster than it produces it, you are under-going exposure. Two things happen:

1. You voluntarily exercise to stay warm.

2. Your body makes involuntary adjustments to preserve normal temperature in the vital organs.

Either response drains your energy reserves. The only way to stop the drain is to reduce the degree of exposure...

• THE TIME TO PREVENT HYPOTHERMIA IS DURING THE PERIOD OF EXPOSURE AND GRADUAL EXHAUSTION.

### STEP TWO: HYPOTHERMIA

If exposure continues until your energy reserves are exhausted:

- 1. Cold reaches the brain depriving you of judgement and reasoning power. You will not realize this is happening.
  - 2. You will lose control of your hands.

This is hypothermia. Your internal temperature is sliding downward. Without treatment, this slide leads to stupor, collapse, and death.

# YOUR FIRST LINE OF DEFENSE: AVOID EXPOSURE

- 1. STAY DRY. When clothes get wet, they lose about 90 percent of their insulating value. Wool loses less; cotton, down, and synthetics lose more.
- 2. BEWARE THE WIND. A slight breeze carries heat away from bare skin much faster than still air. Wind drives cold air under and through clothing. Wind refrigerates wet clothes by evaporating moisture from the surface. WIND MULTIPLIES THE PROBLEMS OF STAYING DRY.
- 3. UNDERSTAND COLD. Most hypothermia cases develop in air temperatures between 30 and 50 degrees. Most outdoorsmen simply can't believe such temperatures can be dangerous. They fatally underestimate the danger of being wet at such temperatures.
- 50 degree water is unbearably cold. The cold that kills is cold water running down neck and legs, cold water held against the body by sopping clothes, cold water flushing body heat from the surface of the clothes.
- DON'T ASK, "HOW COLD IS THE AIR?" ASK INSTEAD, "HOW COLD IS THE WATER AGAINST MY BODY?"
- 4. USE YOUR CLOTHES. Put on raingear before you get wet. Put on wool clothes before you start shivering.

### YOUR SECOND LINE OF DEFENSE: TER-MINATE EXPOSURE

If you cannot stay dry and warm under existing weather conditions, using the clothes you have with you, terminate exposure.

- 1. BE BRAVE ENOUGH TO GIVE UP REACHING THE PEAK OR GETTING THE FISH OR WHATEVER YOU HAD IN MIND.
- Get out of the wind and rain. Build a fire. Concentrate on making your camp or bivouac as secure and comfortable as possible.

### **NEVER IGNORE SHIVERING**

Persistent or violent shivering is clear warning that you are on the verge of hypothermia. MAKE CAMP.

### FORESTALL EXHAUSTION

Make camp while you still have a reserve of energy. Allow for the fact that exposure greatly reduces your normal endurance.

You may think you are doing fine when the fact that you are exercising is the only thing preventing your going into hypothermia. If exhaustion forces you to stop, however briefly:

- 1. Your rate of body heat production instantly drops by 50 percent or more.
- Violent, incapacitating shivering may begin immediately.
- You may slip into hypothermia in a matter of minutes.

### APPOINT A FOUL-WEATHER LEADER

Make the best-protected member of your party responsible for calling a halt before the least-protected member becomes exhausted or goes into violent shivering.

# YOUR THIRD LINE OF DEFENSE: DETECT HYPOTHERMIA

If your party is exposed to wind, cold, and wet, THINK HYPOTHERMIA. Watch yourself and others for symptoms.

- 1. Uncontrollable fits of shivering.
- 2. Vague, slow, slurred speech.
- 3. Memory lapses. Incoherence.
- 4. Immobile, fumbling hands.
- 5. Frequent stumbling. Lurching gait.
- 6. Drowsiness (to sleep is to die.)
- Apparent exhaustion. Inability to get up after a rest.

# YOUR FOURTH AND LAST LINE OF DEFENSE: TREATMENT

The victim may deny he's in trouble. Believe the symptoms, not the patient. Even mild symptoms demand immediate, drastic treatment.

- Get the victim out of the wind and rain.
- 2. Strip off all wet clothes.
- 3. If the patient is only mildly impaired:
  - a. Give him warm drinks.
- b. Get him into dry clothes and a warm sleeping bag. Well-wrapped, warm (not hot) rocks or canteens will hasten recovery.
  - 4. If the patient is semi-conscious or worse:
  - a. Try to keep him awake. Give warm drinks.
- b. Leave him stripped. Put him in a sleeping bag with another person (also stripped). If you have a double bag, put the victim between two warmth donors. Skin to skin contact is the most effective treatment.
  - 5. Build a fire to warm the camp.

Hypothermia may be a new word to you, but its' the *only* word that describes the rapid, progressive mental and physical collapse accompanying the chilling of the inner core of the human body.

Hypothermia is caused by exposure to cold, aggravated by wet, wind, and exhaustion. It is the No. 1 killer of outdoor recreationists.

- TAKE HEED OF "HYPOTHERMIA WEATHER".
- WATCH CAREFULLY FOR WARNING SYMPTOMS.
- CHOOSE EQUIPMENT WITH HYPOTHER-MIA IN MIND.
- THINK HYPOTHERMIA.

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