ACCIDENTS IN AMERICAN MOUNTAINEERING
SEVENTH ANNUAL REPORT OF THE SAFETY COMMITTEE OF THE AMERICAN ALPINE CLUB
1954

The past year, 1953, with which this report of the Safety Committee of the American Alpine Club deals was an average year when compared with previous years. The total number of accidents and deaths resulting from "mountaineering" activities which have been reported to this committee are listed in the following table.

Table 1

Year	*Total Number of Reported Accidents*	*Number of Deaths*
1947	15	11
1948	28	15
1949	17	9
1950	30	8
1951	18	4
1952	35	14
1953	23	13

Over these years there have been fluctuations both in the number of accidents and in the number of deaths. The factors which enter into these fluctuations are multiple and not the least of these is that the persons involved represent such a small number of the total number of climbers and of the man-mountain days that such fluctuations could be expected to occur by chance alone. Another factor is the increased interest in mountaineering as a result of the successful ascents of Annapurna by the French and of Everest by the British (with their attendant publicity) which stimulated more inexperienced persons to climb. Variations in the completeness of reporting the various accidents could also produce these fluctuations. Another possibility would be differences in defining what constitutes a mountaineering accident. In this and the previous reports there has naturally been some selection of the accidents and the truly non-mountaineering accidents, such as those involving hikers, have been omitted unless there was a definite lesson to be learned. In general if the intent has been to climb, then the accident has been included in the report. Furthermore, many minor accidents are never reported to this committee.

In the report of 1953 interest was expressed in man-mountain days. In an effort to obtain information on this, the various climbing organizations were sent questionnaires. About one quarter of the clubs responded. The committee is most appreciative of their cooperation and their soul searching efforts in producing the figures. It was felt, however, that the information obtained was insufficient and too tenuous to be the basis of any significant conclusions. Possibly as more such data is obtained over the years, a valid basis for conclusions will be established.

Geographical Distribution of Accidents:	1947-1952	1953
Atlantic States—North	8	3
South	1	0
Colorado	21	8
Utah	2	2
Wyoming	14	2
Montana	2	0
Arizona and New Mexico	3	1
California	16	1
Oregon	13	1
Washington	10	4
Alaska	—	1
		—
		23
Practice Cliffs All Areas	3	1
Terrain		
Rock	66	15
Snow	29	7
River	0	1
Unknown	6	0
Ascent or Descent (River crossing not included here)		
Ascent	26	16
Descent	45	6
Unknown	30	0
Immediate Cause		
Fall or Slip on Rock	34	11
Loose Rock (handhold pulled out)	10	0
Falling Rock	9	1
Failure of Rappel	5	3
Slip on Snow or Ice	17	4
Fall into Crevasse	4	1
Loss of Control in Voluntary Glissade	5	0
Avalanche	2	1
Lightning	2	0
Failure to Follow Route	1	0
Stuck Rope	1	0
Skiing	0	1
Fall in River	0	1
Unknown	10	0
Contributory Causes		
Climbing Unroped	35	5
Climbing Alone	11	2
Attempt to Exceed Abilities	7	6
Darkness	5	0
Inadequate Equipment	0	4
Old Rope	0	1
Size of Party		
One	11	2
Two	28	4
Three	24	7
Four	8	1
Five	5	0
Six or More	15	8
Unknown	20	1

	1947-1952	1953
Ages of Individuals		
15-20 years	51	12
"Young or College Age"	31	1
21-25	20	6
26-30	5	3
31-35	6	0
Over 35	5	1
Unknown	8	0
Affiliated with Climbing Group		
Unaffiliated	32	10
Not Stated	35	1
Member of Mountaineering Club	29	12
Estimate of Experience		
None or Little	46	11
Moderate	7	7
Experienced	22	4
Unknown	25	1

Month of Year	1952	1953
January	0	1
February	0	1
March	0	0
April	3	0
May	3	1
June	0	0
July	11	6
August	11	7
September	3	4
October	3	2
November	1	1
December	0	0

ANALYSIS OF ACCIDENTS

As in the past two years the various accidents reported have been analyzed and it is noteworthy that the causes seem to be following a regular pattern with only slight fluctuations from year to year. This year, however, two causes stand out and deserve more careful attention. The first of these is apparent. It is rappelling. In 1953 there were three accidents associated with failure *en rappel,* whereas there had been only five in the previous six years. This may represent only a random variation but it still focuses our attention on this procedure which should not be so hazardous. In previous years accidents have occurred as the rappel was being established. This type of accident is caused merely by carelessness. Accidents *en rappel* may also be due to carelessness but should be avoidable if certain precautions are taken:

1. Rappel slings must not rest over sharp rocks nor make sharp angles and in all cases should be padded.

2. Pitons used for rappelling must be checked and reseated, if necessary, after *each* use.

3. Rappelling should not be started by leaping *up* and *out* from rappel points; extremely long leaps while *en rappel* with sudden arrests put a

tremendous strain on the rope and rappel points, as well as upon the individual who is controlling his belay.

4. Rappel with a safety rope if possible—last man can be belayed from below.

5. Nylon rope should not be used except in emergency and then it should be at least half inch nylon with double knots to minimize slippage.

This last comment deserves elaboration. One accident in 1953 apparently resulted from the failure of a nylon sling. It is not known whether it was worn through or became untied. As a result of this accident some tests were made on the ease with which knots in nylon cord become untied under stress and this preliminary report has been published in Appalachia *19*, 598-601, December, 1953. The important point is that because of the elasticity of nylon, knots in nylon subjected to intermittent stress become loosened. Two near accidents have come to our attention in which there was failure of nylon knots. Al Steck reported one instance in which he and Willi Unsoeldi were attempting the El Capitan buttress but had decided to retreat. Steck lowered Unsoeldi from his leading position 15-20 feet above using a ⅛″ nylon cord sling which had been passed through a piton several times and tied with one knot. They were climbing in the cloud of a nearby waterfall so everything was damp. As Unsoeldi was lowered safely to Steck's belay spot, the rope sling fell down upon them. They did not recover the sling but thought it had worn through. They could not exclude the possibility of the knot becoming untied. Another instance occurred in the Shawangunks when a leader had just finished his pitch. He reached around to pull up his rope behind him just as it fell off. His bowline had become untied.

The other cause, or condition, is ski mountaineering. This year, three of the accidents could be placed in this category. With the increased interest in this field, more attention should be given to the proper training and education of the public and climbers. This will involve a knowledge of dangerous snow conditions and where the "safe" route lies, a knowledge of what constitutes adequate equipment for extreme weather conditions, a responsibility to contact local wardens and rangers to benefit from their knowledge and experience, and the realization that an easy climb under summer conditions may be extremely difficult or even impossible in the winter, also a minor accident in winter not in an area where there is handy assistance may have serious consequences.

It has been suggested that a more complete bibliography of Mountaineering safety be collected and the committee will welcome any references that may come to the reader's attention. They will be collected and printed in a future report.

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REVIEW OF ACCIDENTS 1953

Maine—Katahdin: David Ripley (21) of Belmont, Mass., while leading, suffered a fall of about 100 feet on September 12, 1953. He was rock climbing with Robert Kruseyna (25) on Pamola. His fall was down a slope and not a sheer drop. Ripley stated he was too tired to hold on. His companion caught his fall and Ripley received serious bruises which necessitated his evacuation by means of a stretcher.

Source: Appalachia *19:* 588, December, 1953.
Roland Anderson, Ranger at Mt. Katahdin.

Connecticut—Sleeping Giant, State Park: On the afternoon of May 2, 1953, members of various mountaineering clubs were engaged in recreational climbing on Mt. Carmel after a morning occupied in discussing and demonstrating mountaineering safety techniques. John Ewing (19) and Ted Rice of the Princeton Mountaineering Club paired off. The weather was raw, overcast with occasional mist and clouds on the mountain. The rocks were generally dry, but protected or mossy spots were wet from previous rains. A route of ascent was described to Ewing by Steve Porter, a Yale climber who knew the cliff. Porter, conscious of loose rocks to the right of the route told Ewing to "stay in the slot." The climb rose diagonally to the left following a crack at some points and a broad open "V" at others. A buttress formed the right boundary of the first half of the route and was normally not climbed because of obviously precariously balanced rocks present. The rock was firm, not rotten, but quite fractured. Ewing climbed the first pitch of about 20 feet on the normal route smoothly. He passed one end of a broad grassy ledge and then proceeded about 40 feet straight up the face of the buttress to the right of the described route. This ascent was completely exposed, probably more difficult than the normal route, and passed close to, if not directly over, a number of large loose rocks. In the total lead of about 60 feet, no pitons or other security were used. Ewing then took a stance and brought his second man, Rice, up to a wide ledge on the buttress, had Rice tie to a bush, and then led up diagonally to the left across the left face of the buttress to get back on the route. This necessitated crossing more loose rocks but was simple climbing because of the low angle and fractured rock. In 15 feet he passed the usual belay position at the junction of the buttress and main cliff face. From this point the climbing was steeper, exposed and with holds not so large, but still of easy caliber. Ewing crossed the face 4 feet to the left and proceeded up 6 to 8 feet where he placed a long horizontal type piton in a vertical crack on the solid face of the cliff. When in driving position for