SKI TOURERS' ASSOCIATION

Re: KUNAMA DISASTER

On the morning of Thursday the 12th July, 1956 an avalanche fell from the summit of Mount Clarke, Main Range, Kosciusko. Kunama Hutte was wrecked and an occupant fatally injured. The victim was Roslyn Wesche, only child of Mr. and Mrs. Venn Wesche, of Sydney.

At the inquest the Government Medical Officer in Cooma, Doctor Harvey Dakin said that the death was apparently caused by dislocation of the spine. The Coroner Mr. Quarmby found that she died from injuries accidentally received when an avalanche destroyed Kunama Hutte. Brian Studley of Cooma, giving evidence at the inquest stated that after digging operations had been carried out in the south-east corner of the building that Roslyn Wesche was found still in her sleeping-bag on a mattress. A joist was pinning her to the mattress by the back of the neck. The impact of the joist apparently caused death.

In order to place on a record a statement of events the following have been compiled"

1) A statement in by occupant of Kunama (Ian Curlewis).
2) Ski Patrol (statement by Patrol Captain Brian Davidson).
3) The avalanche (G.R.T. Ward).

The object of these reports is to establish the circumstances of the disaster as press publicity contained many erroneous statements. Again, by establishing a knowledge of the circumstances there will be placed on record information that will be of use in the future considerations of safety in skiing on the higher parts of the Main Range.

OCCUPANT'S STATEMENT

On the night of 11th July, 1956 there were eleven people sleeping Kunama Hutte. They were Jann Benn, Murray Clark, Ian Curlewis, John Holt, Keith Hordern, Peter Kelly, Allie Payne, Jill MacPhee, Margaret Philpotts, Anne Roarty and Roslyn Wesche. Eight were sleeping in the bunks provided and three on the gallery upstairs. The weather during the day had been very bad and a great deal of snow had fallen.

The first thing I remember about the following day was waking to hear Keith Hordern moving about and realising it was daylight. I think I dozed for a few seconds when all of a sudden there was a noise of breaking timber and the Hutte commenced to move forward and the gallery above me tilt forwards. The Hutte stopped moving and I was unable to move for some time as one of the rafters supporting the gallery had pinned me, as I found later, on the edge of the sundeck in the front of the Hutte.

Within a few minutes of the Hutte becoming stationary Peter Kelly and John Holt had checked that everyone else in the Hutte was answering and almost uninjured apart from Roslyn Wesche, who had been sleeping in the south-eastern corner.

Keith Hordern had immediately put on a pair of boots and gone for assistance from the Tow House. The four occupants of the Tow House were over at Kunama within a few minutes and with John Holt, Peter Kelly and Murray Clarke set about trying to find Roslyn in all the broken timber and debris in the south-eastern corner. It was not until some snow had been dug away from the outside and part of the wall broken away that she was discovered.

Before leaving the Tow House a call had been put through to Albina and with one hour of the accident all available assistance in the area was helping the occupants of our Hutte.

When I was released from my position I saw that the whole Hutte had been moved forward off its foundations with the northern wall laying flat and badly broken on the snow in the wind scour, the gallery was at an angle of 45 degrees and most of the southern and eastern parts of the building were badly damaged and under snow.

The two Fyreside Heaters which had been burning all night we found had been pushed off the floor and were face down in the snow.

Finally, when boots were made available by the helpers we moved over to the Tow House where radio contact was made with the Chalet. Within an hour of the call to the Chalet the Chalet rescue team had arrived ready to give more assistance if necessary.

THE SKI PATROL

The news of the avalanche and loss of life reached the Chalet, Charlotte Pass about 10.15 am by radio telephone transmitted from the S.T.A. Tow House at the listening hour of regional radio installations. The Manager of the Chalet, Mr Stanley McGuinn, immediately directed the Ski Patrol to leave for the area.

Concurrently, an S.M.A. Snowcast was dispatched to Charlotte Pass when the news by radio had been received at Island Bend.

At the Chalet, the Ski Patrol was ready with the Akja Rescue Sled at 11.00 am to start for the Kunama Hutte. Blankets, medical supplies, food and clothing were also taken. The Patrol moved off about 11.15 am with Ski Patrol Captain Brian Davidson in charge. The other members were H.J. Hawkins, T. Mandlik, Cees Koeman, Helmut Tschaffert. Making all speed possible the Patrol reached Kunama in the fast time of one hour. Weather conditions were overcast with intermittent snowfalls. The snow surface consisted of extremely soft thigh deep dry powder which made conditions very difficult for the return journey with the victim of the disaster on the Akja sled. The Patrol was assisted up the long ascent from the Snowy River to Charlotte Pass by members of the Southern Alps Ski Club under the leadership of the Club's President George Nicholl.

The Akja sled reached the Chalet road Gate at 3.15 pm. Dr Hamilton made a medical examination prior to the transfer of the body to a snowmobile. Mr and Mrs Wesche were then conveyed in the S.M.A. Snowcat to the hotel site where the Cooma ambulance was waiting to meet the snowmobile. Considerable difficulty had been experience by ambulance officer Peter Wurth in reaching the Hotel owing to the snow on the road, which had to be snow-ploughed to permit the ambulance to get through.

THE AVALANCHE

The avalanche that destroyed Kunama Hutte came down the entire length of the north face of Mt Clarke about 7.20 am on the morning of Thursday the 12th July, 1956. This avalanche originated at the summit of Mt Clarke and swept to the floor of the basin a track some 50 yards wide at its maximum. Mt Clarke forms the southern segment of the Kunama Basin. The altitude of Mt Clarke is approximately 6,900 ft. The northern slope comprises some rock crags near the summit and a fairly even moderate gradient to the floor of the valley. The centre of the segment comprising the Kunama Basin is Mt Northcote 6, 991 ft. which has very steep easterly slopes into the Basin. To the north is Mt. Lee with a steep summit section training into moderate slopes. The floor of the Basin is at an approximate altitude of 6,200 ft. In the month of July the prevailing wind is from the west. Most of the precipitation in snow comes from westerly directions. Thus the east facing slope of Mt Northcote is subject to extremely heavy deposition of snow; also the south facing slopes of Mt Lee. The north facing slopes of Mt Clarke generally carries the least amount of snow.

The synoptic situation in the 24 hours preceding the avalanche was as follows:

In the morning of 11th July, a closed curve depression was centrally situated over New South Wales. As this depression moved towards the coast two centres developed on 1th July. One of these was off the south coast. The last named centre had a reading of below 1002 millibars or 22.50 inches. The following high pressure system was particularly vigorous with a central reading exceeding 1031 millibars or 30.45 inches. The pressure gradient became extremely marked. This resulted in a very cold south easterly air stream over the area.

The effect of this weather system can be noted in the tabulation of readings hereunder. The readings concerned were taken by the Snowy Mountains Hydro Electric Authority at the Spencers Creek Station (six miles down the mountain). These readings are about the same as could have been expected in the Kunama Basin except that temperatures would be some degrees below those tabulated with wind velocity higher. The readings of the previous six days are also shown.

1956	Temperatures for past 24 hours		Temperature at 7.30 am	Weather & wind at 7.30 am	Snow & Rainfall during previous 24 hours
	Min	Max	24		
July 5, Thurs	19	33		9/10 Cloudy no wind	No rain or snow
July 6, Fri	24	34	28	7/10 Cloudy N.W.	No rain or snow
July 7, Sat	No readings taken				(Snow and rain over week-end 615 pts. of snow and Rain incog. 9" snow.
July 8, Sun	No readings taken				
July 9, Mon	23	39	29	½ Cloudy S.W. 2 mph	
July 10, Tue	10	26	12	Little cloud, no wind	No rain or snow
July 11, Wed	16	28	27	¾ Clouded, south 10 mph	No rain or snow
July 12, Thurs	24	28	28	¾ Clouded, S.E. 15 mph	No rain 18" snow

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A further explanatory note is made by quoting from "Skiers' Handbook", relevant in mid-winter avalanches as follows:

"The prevalence of avalanches in Europe and elsewhere, and their relative absence in Australia seems puzzling. The writer suggest the principal reason as follows: In Europe snow precipitates on mountains say between say 3,000 ft and 12,000 ft. In Australian snow precipitates on mountains between 5,000 ft and 7,000 ft. Thus the European snowflake falling among deep rugged mountain terrain is likely to be air borne for a much greater time and so is subject to disintergrating influences before settling to a loose form of powder snow that will readily avalanche off a steep slope. In Australia the snowflake reaches the slope of the ranges quickly with its interlocking fronds fairly intact. Powder snow is rare, and when it occurs, it is formed by high winds and blizzards disintergrating the flakes whilst on or near the surface, and only wind-blown powder snow appears. Much of this is re-sealed to the surface by the action of wind crust formation and rime crust formation. Thus mid winter avalanches are rare in Australia. When they do occur in mid winter the locale is usually a snow basin (like the Kunama Basin) where powder snow is deposited on steep slopes and faster than snow crusts can form."

The above extract when read in conjunction with the brief topographical description of the area, the meteorological reports and the synoptic situation can suggest the causes of the avalanche. The weather tabulation shows that the previous weekend had on record 615 points of precipitation. Most of this was rain, with nine inches of snow.

Temperatures were moderate. On Monday the 9th the weather fined up with a little more snow,. On Tuesday the 10th the temperature dropped much below normal. On the 11th the weather continued very cold and cloudy with the wind coming from the south. On July 12th the readings show continued low temperatures, the wind around to the south-east caused by the distribution of barometric pressure already referred to which combined to produce a sudden fall of very dry snow. Eighteen inches of snow resulted which fell on a hard icy surface produced from the cold conditions following the rain and milder weather of the previous week-end. Thus there existed a potentially dangerous situation, but under Australian mountain conditions there was no cause for concern. The snow was loosely packed. It seemingly comprised semi-powder snow that had not been sealed by rime or wind crusts, furthermore it had come from a direction diametrically opposed to normal in July, thus made the area a lee slope.

How, then, did the slope avalanche? To answer this question we must consider the summit of Mt Clarke. Here the wind, blowing with much higher velocity, steadily up on a high pure powder snow cornice. The critical hour arrived on the morning of the 12th. The wind and snowstorm during the night had built the cornice to the point of collapse with wind -blown powder. The moment of disaster came about 7.20 am. A powder snow avalanche and cornice avalanche originated. This became channelled between two rocky outcrops, which concentrated its effect. In turn this triggered of a larger avalanche comprising the unstable snow slope below. Snow to a depth of two or three feet was set in motion. Such of it had sufficient internal cohesion to come down in big blocks. The situation can be likened to a stone shattering a sheet of non- splintering safety glass. A major avalanche was generated (speed of movement not known) and it impacted full on the back wall of Kunama some six hundred feet below. The back of the building was crushed inwards, and the momentum of the avalanche moved the building forward half its length whereupon the gallery and roof toppled over into the snout of the avalanche as its force became spent. The site of Kunama is on a round knoll (at the foot of the slope) on which the building was literally perched. This natural protection was of no avail due to deep snow in the area around the knoll. Kunama itself was free of snow above main floor level owing to the wind scour around the building.

Structurally, the building comprised a granite basement, a main floor in stud frame and weatherboard construction, plus a gallery under a steeply pitched roof. For additional strength the stud frame construction was tied to the masonry by wire ropes at each corner from the top plates to chains embedded in the masonry, with cross bracing by wire ropes on two sides. The impact of the avalanche was so great that in one observable instance the eye hook linking the wire rope to the chain was straightened out.

There appeared to be a safety factor in as much as the building did move with the avalanche, which slowed the tempo of its collapse, and seemingly saved ten inhabitants from injury that could have resulted from being buried in snow and debris. In abstract, collapsing timber may be a lesser evil than falling masonry as in earthquake areas. Kunama Hutte is a total wreck caused by unforeseeable effects of a freakish snow storm in an area where no danger was anticipated.

Kunama Hutte prior to the 1956 avalanche

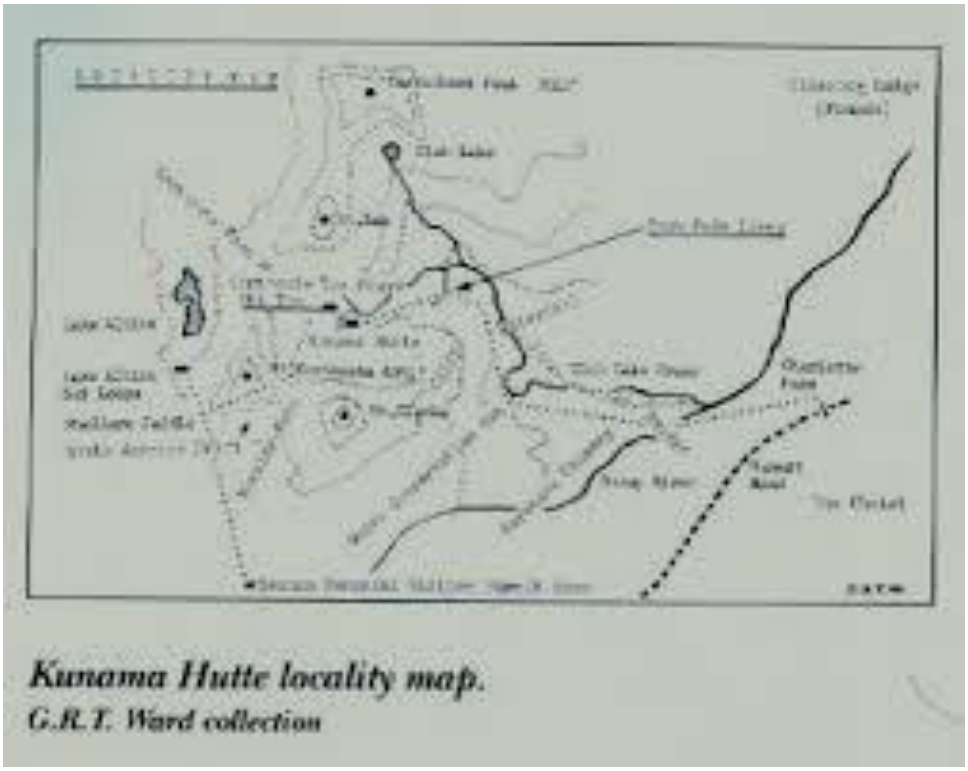
The interior of Kunama Hutte

The avalanche path on Mt Clarke

Roslyn Wesche

Kunama Hutte south western corner following avalanche hit.

Kunama Hutte destroyed by the avalanche



Kunama Hutte locality map.
G.R.T. Ward collection

Digital images downloaded 16.11.17 from www.google.com.au – Kunama Hutte Avalanche