

# CAVES and ARCHAEOLOGY in SOUTHWEST TASMANIA



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## SOUTHERN CAVER

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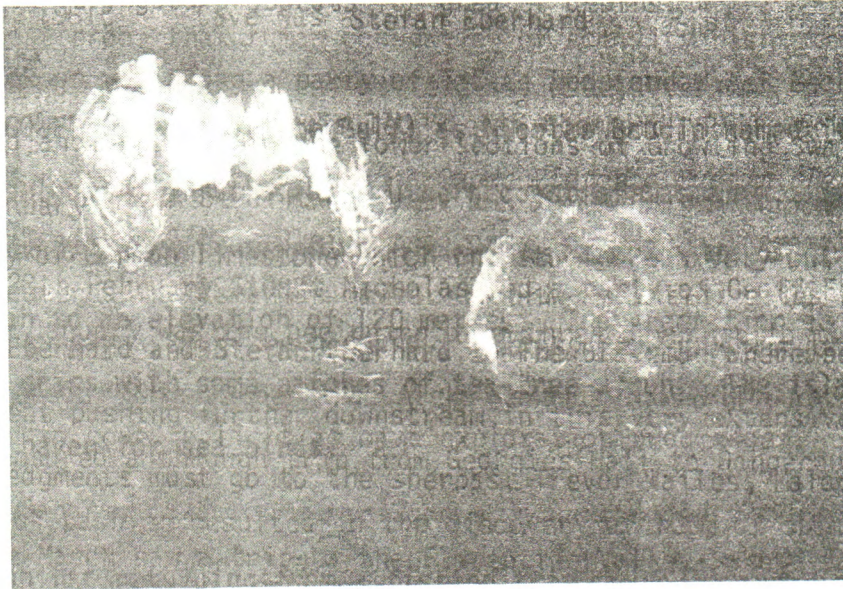
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FRASER CAVE

1981



## AN INTRODUCTION TO THE FRASER CAVE DISCOVERY

Stephen Harris

Impetus for the two archaeological expeditions into the Wild Rivers region early this year was given by the Hydro Electric Commission's environmental impact statement. That document stated that there was no evidence of archaeological sites in the southwest. The archaeology and anthropology component of the EIS was more or less dismissed in one line. On one hand there was slight justification for this. The prevailing belief was that aboriginal man never ventured into the interior of the southwest. Indeed, Rhys Jones (in a 1974 book by Tindale), on the basis of statements by Robinson (13 Mar. 1830:128), claimed that "There were no routes leading inland across the mountains to central and eastern Tasmania and the aborigines did not go there" although there had been vague ethnological evidence of routes inland. For example, in 1832 W. S. Sharland noted signs of a recent burn on the Loddon Plains and in 1840 James Calder found recently occupied huts near Frenchmans Cap. On the basis of ethnographic information and lack of sites discovered, Jones in 1974 produced a map showing the whole inland southwest and the inland core of the west coast thought to have been unoccupied (see map on page 68).

Rhys Jones had estimated a southwest tribe to comprise about 4 bands with a total population of 300 - a group whose activities oriented about the coast and who travelled the long coastal distances between Recherche Bay and Port Davey, and between Port Davey and Cape Grim in the northwest. The dense and prolific midden sites scattered along the west and south coasts testified to the marine orientation.

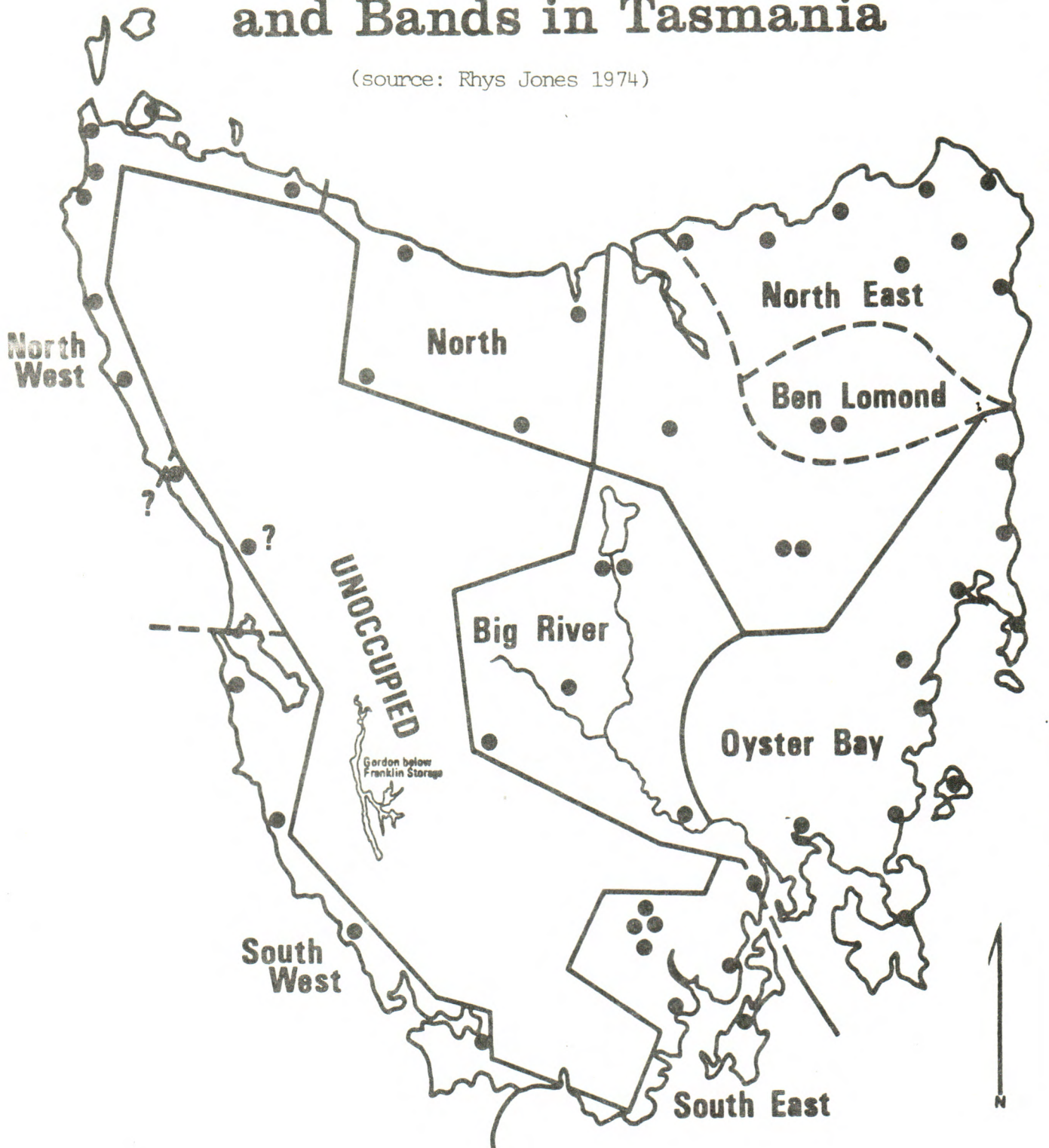
Until the last couple of years a vast core of the southwest produced no archaeological evidence for prehistoric man. On the other hand, no-one had seriously looked for it.

The Tasmanian National Parks and Wildlife Service however, believed that some basic reconnaissance should have been carried



# Location of Aboriginal Tribes and Bands in Tasmania

(source: Rhys Jones 1974)

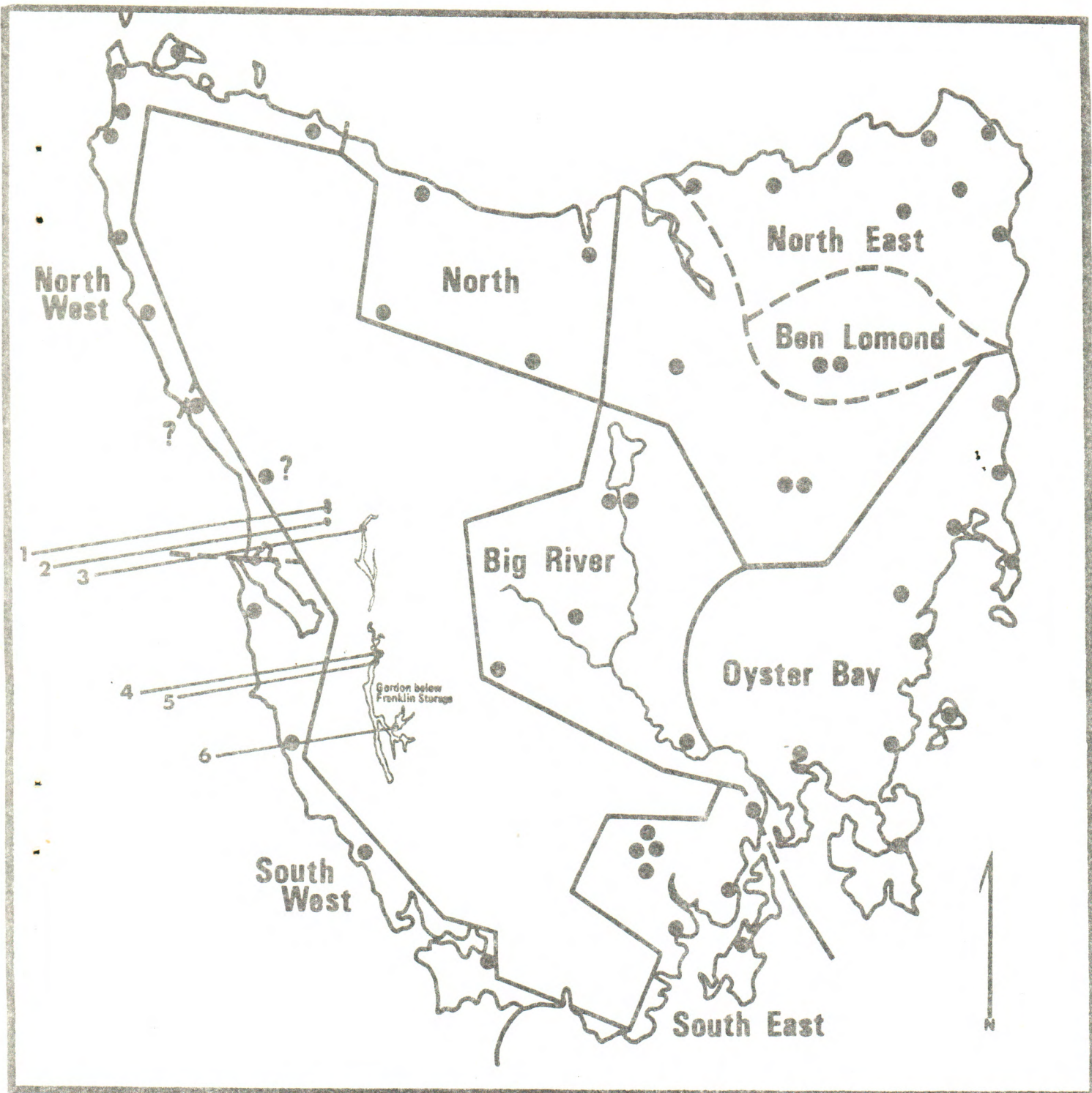


● Local residence of a band  
 — Tribal boundary

0 40 80  
 km

MAP FROM Report on the Gordon River Power Development Appendix V: Draft Environmental Statement. Hydro-Electric Commission, Tasmania.  
 November 1979.

"THERE ARE NO KNOWN ABORIGINAL SITES IN THE PROJECT AREA."



1. EAST QUEEN RIVER-Surface site. CORBETT,K.D. (1980) A record of aboriginal implement sites in the Queenstown area,Tasmania.Pap.Proc.Roy.Soc.Tas.114.
2. QUEENSTOWN MORaine-Surface site. KIERNAN,K.W.(1980) Pleistocene Glaciation of The Central West Coast Range,Tasmania. Unpub.Thesis, Univ. of Tasmania.
3. NELSON RIVER-probable cave site. KIERNAN,K (1979) Nelson River South.Cav. 10(2):12-13; KIERNAN,K.W.(1980) Pleistocene Glaciation of the Central West Coast Range, Tasmania. Unpub. Thesis, Univ. of Tasmania.
4. GONDWANA ROOTS SHELTER-cave site. KIERNAN,K. Occupation discovered 13MAR81
5. FRASER CAVE-cave site. KIERNAN,K. Occupation discovered 9FEB81.
6. DENISON RIVER-surface site. JONES,R & RANSON,D . Discovered January 1981.

Other hitherto<sup>un</sup>published sites are being recorded from the Queenstown area by Jim Stockton. The Nelson River site appears to lie within the perimeter of the proposed Franklin-King hydro-electric storage.



out in the southwest before any dismissal of its archaeological potential. This opinion was strongly supported also by the archaeological movement. The Premier, Mr. Lowe, assured the Australian Archaeological Association that investigation for prehistoric sites would be carried out in the area before damming. The Service seized the initiative and organised a trip for January 1981. Dr. Rhys Jones, the well-known researcher of Tasmanian prehistory was invited to accompany this first expedition.

There were grounds for some cautious optimism. Sites had recently been discovered on the edges of the southwest wilderness. A cave was discovered in the Florentine Valley in the 1970's at 400 m altitude, which produced aboriginal artifacts in association with material dated at approximately 20,000 years ago. This meant that during the last glaciation aborigines occupied high inland sites where vegetation may have been open grassland in valleys. Snow and ice would have covered surrounding peaks.

Also, Dr. Keith Corbett recently reported the finding of prolific scatters of stone tools on ridges around Queenstown. These tools may have been left on the ground before the existence of the forest which once clothed Queenstown's cradling ridges.

In January 1981 a National Parks and Wildlife Service/Australian National University expedition found a core and scrapers on top of a riverine terrace near the mouth of the Denison River. This was the first evidence of ancient human occupation from the Wild Rivers region.

In the Nicholls Range area, limestone caves and rockshelters were searched in vain for evidence of prehistoric man. The incredible irony was the discovery of an open site in a region heavily vegetated by rainforest. The search had been concentrating on caves but by extraordinary chance, tools were found at a site where a large myrtle tree had fallen over, peeling off the surface layer of peat, to reveal stone tools:

Following this discovery in January, the following month a Tasmanian Wilderness Society party discovered a rich deposit of man-made stone tools associated with numerous fractured animal bones in a cave on the Franklin River.

It was a significant find.

The archaeological expedition which followed this discovery, and organised by the National Parks and Wildlife Service and the Australian National University, in March 1981 made world news. It has been stated by Dr. Jones that the Fraser Cave site is one of the six richest archaeological sites in the Western Pacific.

Fraser Cave is now hopefully protected for all time from the threat of inundation. The Tasmanian Government on the 30th April 1981 proclaimed 195,200 hectares of Crown Land as the Franklin-Lower Gordon Wild Rivers National Park. This proclamation was gazetted on the 6th May 1981 and came into effect on 13th May 1981. This was a farsighted and significant action.



*Kevin Kiernan taking pollen samples from excavation in Fraser Cave.*



## DAYS IN A WILDERNESS

Kevin Kiernan

(i)

We bundled ourselves and gear out of the chopper as it leant one skid on a clump of button grass - one of few signs of the open plain the map had promised us, and which proved to be mostly thick tea-tree. On Goodwins Peak it looked worse - much worse - and our needle-in-the-haystack quest for a cave reported there twenty or so years ago seemed daunting.

Just any cave would not do. This cave was special, as it was reported to contain bones - including human bones, presumably those of an escapee from the Macquarie Harbour convict station. We knew the area was cavernous - Ian Cantle had reported caves on the lower Jane River between the Gilgamesh and Humbaba gorges a couple of years before. Goodwins Peak rose westwards of the creek of the same name, which flows northwards along the western margin of the limestone belt to join the Jane. But it was to be a quick trip, the Wilderness Society hoping for some publicity to counter plans to dam the Gordon below the Franklin. From my point of view it was a chance to get a look at a new area of limestone.

Bob Brown and Bon Burton from the Wilderness Society were with me as we set up camp by Goodwins Creek. We quickly found the rock was in fact Gordon Limestone, and not dolomite as had previously seemed possible. Our first afternoon was spent initially following the creek downstream for a couple of kilometres, hoping to find a reported blazed route past the cave.

The sun filtered through onto the burgundy waters and reflected ever moving shadows and light upon the fluted limestone which overhung the stream. An inquisitive platypus sniffed at our toes, then lay back unimpressed. Here beneath the deep green canopy we had found paradise - but possibly a paradise doomed to damming.

We found ourselves in a long canyon 5 metres deep, leading to a spacious

entrance to the stream, including its resurgence 300m away. Although incompletely explored it was quite a respectable cave, and we were well satisfied with the day. A quick look upstream revealed nought.

Next morning, our second day in this wilderness, we climbed Goodwins Peak, wondering how many had preceded us onto this remote viewpoint. The smoke of bushfires limited visibility. We traversed from the summit for some kilometres towards Humbaba, but saw no sign of prospectors having passed this way, apart from a couple of ancient blazes near the summit which we could not follow, and were off the reported route anyway. But the glorious forest was a magnificent reason enough to venture there.

Our next camp on the second night was on a shingle bar in Goodwins Creek, a kilometre or so downstream from the cave we had encountered the previous day. Sheltered by a massive limestone overhang, our early morning lethargy was watched by an inquisitive wallaby, little knowing man could be something to fear.

In this part of the creek, and onwards next day to the Jane, we splashed through a limestone gorge full of shadows and light, deep pools, huge overhangs 10m high spanning the full width of the spacious stream. Only occasionally were we forced to ascend the walls with our heavy packs. What an idyllic day could be spent splashing and swimming up here in the sun, unburdened by clothes and pack, and with only a torch. Beyond the stream there was some evidence of a rugged karren field. There were abundant small caves including meander cutoffs which time left unexplored. We saw no surface tributaries that day, and, until we reached the Jane, no Huon Pines.

Two of us paddled on lilos up to the helipad to get our rubber duckies. We saw no caves en route (about 1km) but the limestone extends much further upstream.

Downstream lay Humbaba. It is always futile to compare beauty, but Humbaba impressed me as no gorge has before. Circular potholes were cut in broad rock platforms, the river cascaded over wide waterfalls roaring and echoing beneath the hanging gardens of this magnificent rockscape. Towering clouds were suspended overhead. A wild thunderstorm exploded within Humbaba's soaring vertical walls, with one lightening bolt coming far too close for



comfort and sending us ducking for cover. It was an unforgettable experience in a most awe inspiring place.

The soft light of a clearing southwest evening escorted us out of Humbaba onto the placid waters of the lower Jane. I looked back with a sadness that is becoming habitual from wondering if I will ever see again so many beautiful places marked for consumption by man's materialistic greed. The water was overhung by Huon Pines and the peaks were wreathed in bands of mist as we slipped from the Jane into the broader waters of the Franklin. The mist gave way to a night sky lit by the flickering of distant lightening.

(ii)

An early morning visit to Franklin cave was rewarded by glow-worms and attractive cave decoration. Two alluvial fills are being eroded by the present stream, with flowstone developed upon the most recent.

After another few hours we arrived at Fraser Cave. I had found the cave in 1977, during one of the early trips with the Sydney cavers. We had noted bones in the cave, but thought nothing more of their possible origin - after Montagu\* I was quite interested in megafauna and keen to have another look. Rhys Jones' and Don Ranson's find of a corestone and several flakes on a Denison River terrace a few weeks before added a new dimension to the possibilities.

After making sure my companions knew where I had landed I headed inland to the cave and climbed down into the small gully in the entrance chamber where I remembered the bones were. Immediately I was struck by their abundance, but more importantly by the difficulty in accounting for this accumulation by the usual mechanisms: neither stream transport, natural pitfall or marsupial carnivore occupation was an adequate explanation.

I carefully picked up a wallaby tibia and found it was broken in a manner suggestive of fracture while fresh, rather than due to damage in natural transport of the dead animal. Others appeared burnt, another was split.

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\* Montagu in Tasmania's northwest is the locality of caves containing rich Pleistocene bone deposits discovered by Mr. Kiernan some years ago. (Ed.)

I probed gingerly into the clay with my pocket knife and hit something hard - a small cobble rounded by river action and quite out of place here in the clay. Almost simultaneously my eye was caught by a chunk of white quartz which also was not a natural arrival. Suddenly I found a stone tool in my hand, then another, then the charcoal of an ancient hearth. Whose hand had last held these tools? What did he feel when he held it; what did he love; what did he fear; what did he believe; by what was he troubled? I cannot remember how long I sat there.

Where the hell were the two Bobs? I raced back to the river only to find them forlornly wringing out Bob Burton's clothes and sleeping bag after discovering that black barrels are not always leakproof. Back at the cave we descended the gulch and found more. Then in the main entrance chamber we realised the damn things were everywhere and we'd walked straight past, as had a couple of dozen other people who had visited the cave, including myself - twice.

We conducted a brief survey of the site and calculated that the deposit lay over about 100m<sup>2</sup> and was something under 2m thick. Rather than disturb the deposit unduly, we collected some charcoal and pollen samples from a natural section and a few surface flakes to convince perhaps armchair ridden bureaucrats back in the city.

But the rafting season was not over. Maps of the location of Fraser Cave had been published by the HEC, the University of Tasmania and the Sydney Speleological Society. To reveal Fraser cave as the site could mean souveniring or accidental damage. To indicate only that the find was in a known cave may have been little better - the descriptions said bones were present in Fraser cave and that might enable putting two and two together. So until it was possible to record and protect the most sensitive parts of the deposit, it was to be a new cave.

(iii)

A few days later, National Parks and Wildlife Service archaeologist Don Ranson and I squinted through the haze of lights, cameras, cords and people at a Wilderness Society press conference. The find made lead item on local T.V., radio and newspapers, with prominent coverage in the mainland media too.



The site lay beneath the level of the proposed hydro-electric impoundment, a point not lost to the hydro-electricity group HEAT, who immediately denounced the find as a bit too convenient to be believed. Former State Premier "electric" Eric Reece, the man who fought so determinedly to destroy Lake Pedder made it clear he considered the matter inconsequential compared to megawatts. The Hon. Harry Braid, chairman of the select committee of the Upper House of State Parliament which wanted to dam the area called for a check on the claims of an archaeological find. His tactic of suggesting some people were claiming it was a fake was wholly successful in initiating such claims, although he was careful to dissociate himself from any such nasty suggestions.

Kiernan responded that the suggestion was insulting and that "what Mr. Braid does is his problem ... all I would like to do is get on and do my work and hope the politicians evaporate". Meanwhile the local "cavers" disinterestedly continued to suck their tinnies. ASF Vice President, John Dunkley, deplored the political interference in work on the new site. Braid's ill-informed suggestions that outside experts check the claim collapsed. One of the experts in fact suggested that no hydro scheme should be permitted until the potential of the South-West for archaeological material had been surveyed. The ABC picked up the theme that reputations and professional integrity were being impugned by the pro-HEC lobbyists, and apart from a few letters to the press the shouting died.

(iv)

Mick Macphail, a palynologist from the University of Tasmania, Geography Department, examined the pollen samples, and found evidence of alpine flora at the site, only about 100m above sea level. A few weeks after the find I returned to the cave with Don Ranson, Rhys Jones (Senior Fellow in the Department of Prehistory at the Australian National University) and a NP & WS team. A limited excavation proved the site to be incredibly rich with perhaps 50,000 flakes and an equal number of bones recovered from a pit of less than 1m<sup>2</sup>. Fragments of Darwin Glass, an impactite associated with a meteorite crater in the Andrew Valley to the NW were found among the tools.

Rhys Jones compared Fraser Cave to the classic prehistoric sites of France

which he had worked on in his youth. He suggested it is the richest limestone cave site, and "one of the most important and richest prehistoric sites ever found in Australia". It was, he claimed, the site for which he had dreamed during his 16 years in Australia. Again the cameras whirled and the presses pressed.

In 1977 a number of caves were named after the political figures who would decide their fate. When Fraser Cave was named the Prime Minister wrote expressing his personal thanks, and indicated he considered it an honour. Immediately after finding the artefacts I wrote and informed him in confidence of the situation. He replied wishing every success for the work on this "exciting and important discovery" and asked to be kept informed. Following the excavation trip it became possible to reveal the full story, although it had leaked to at least one political journalist from the Prime Minister's Office.

The Tasmanian Chamber of Industries was not amused, suggesting the smoke-screen story of a new cave was "reprehensible". Some letters to the editor took the opposite position, one deploring "this display of crass ignorance by these latter day industrial troglodytes" and headlined "Chamber of Horrors" by the newspaper concerned. Another advised "my son has an encyclopedia which tells me all I want to know about aboriginals and prehistoric man". Political reporter Hendrik Gout from TVT6 Hobart, visited the cave with a cameraman during the dig and sold his brief documentary item nationally.

Nor was the Tasmanian Nomenclature Board amused. The contributions of this body to humanity had included denouncing the Sydney Speleological Society for "gross impertinence" in naming caves outside their own state. The Board itself had given the name Lake Pedder to the artificial impoundment which drowned the true lake, thereby helping confuse the public into thinking the Pedder was merely being enlarged. The name "Fraser Cave" did not amuse them as they opposed so immortalising living politicians. Their vehement protests drew a question in State Parliament from Democrat, Dr. Sanders: Was it true that Mr. Kiernan, in common with such explorers of Tasmania as Captain Cook and Abel Tasman named his cave after "a contemporary existing political figure, to wit, Malcolm Fraser?" Two ministers



argued against having to answer, no-one knowing who was responsible for the Nomenclature Board. Days later Lands Minister, Lohrey, said in the House he had asked the Board to reconsider its attitude - "... as much as I dislike the name Fraser - it's a horrible name - the individual who makes the discovery has the right to name the cave whatever he thinks appropriate". Whither the Nomenclature Board? Well it might. And there was a near coronary in Hobart when a slumbering speleo was awakened by a phone call from the Prime Ministers's Office .....

(v)

And what is the significance of Fraser Cave? Most important is the sheer magnitude of the deposit and the abundance of tool and bone, promising much information on a developing technology and the diet of a primitive people. Guesses have been made as to the antiquity of the deposit, but let's leave that lie until the radiocarbon assays are determined. It's too early to say much useful on that front, but suffice it to say occupation has now been demonstrated of an area previously considered unoccupied. It may have been in the cold of the late Last Glacial Stage when the vegetation was more open; possibly during post glacial time despite the heavy forests, or both.

(vi)

As the most recent visit drew to a close I slipped away quietly one evening for some peace and solitude. Descending into the little F36 depression east of Fraser Cave, I visited a limestone rock shelter set beside the gnarled roots of an old myrtle tree. It was an idyllic spot and I felt a presence I could not explain. It was like being drawn towards something. A bone protruded from the clay. I squatted in the entrance of this cosy shelter, and gazed out into the dripping forests as the darkness rolled in. Reaching down, I found a stone tool in my hand, and my mind vanished again into another world .....

## A NARRATIVE OF AN ARCHAEOLOGICAL EXPEDITION TO THE FRANKLIN RIVER

Stephen Harris

After the success of the first archaeological expedition into the wild rivers region, which resulted in the discovery of several ancient human artifacts high on a river bank, we were primed for future clues to prehistoric human occupation of the region.

As soon as Kevin Kiernan's party returned to Hobart, they contacted the National Parks and Wildlife Service and planning began immediately for a second expedition into the wild rivers area. The party would comprise Dr. Rhys Jones, A.N.U. (eminent prehistorian); Kevin Kiernan, University of Tasmania (geomorphologist); Don Ranson, N.P.W.S. (archaeologist); Barry Blain, N.P.W.S.; Greg Middleton, N.P.W.S. (speleologist and coordinator of the expedition); and myself. Bob Burton of the Tasmanian Wilderness Society assisted the expedition in its final days.

Our journey began on Macquarie Harbour on Monday the 9th March, with some of us and our gear travelling in the James Kelly, while other equipment with Blain and Middleton, travelled in the jet boat with Peter Davis, the Strahan based N.P.W.S. ranger.

At the terminus of the Kelly's trip on the Gordon (Marble Cliffs) Peter Davis took on board the remaining gear and personnel and headed back up to Shingle Island on the Lower Franklin River where he had unloaded earlier.

The weather started to fold into rain and mist. The punt and the rubber "Beaufort" boat were loaded so high with gear that we were seriously beginning to consider whether we should have to make two trips.



We finally set off, the two outboards ripping apart the peace and tranquility. Perched on and between our gear, the six of us little realised that the rest of the day would be so rigorous and exhausting and would end with us being cold, wet through, and only just reaching our destination at the fall of darkness.

The difficulties encountered were in pulling the watercraft up through the rapids of the swiftly flowing Franklin. Even though the water level in the river was low due to a very dry summer, all the strength we could muster was just barely enough to get us through the rapids. Cold water tore the warmth away from our legs as our day deteriorated into a cold halfnight of rainstorms and mist. Our energy became sapped by hauling the heavily laden boats against the strong current over slippery stones, as well as doing 2 complete portages, firstly over Big Fall and then over Double Fall.

Darkness had just descended on the wilderness when Kevin saw our destination through the gloom. It happened to be one of the very few landing places along the limestone cliffs.

Shivering with cold we unloaded our gear and stumbled through the wet scrub to the cave, about 30 metres from the river. Rain descended again and most of our gear was brought to the dry sanctuary of the cave. Dry clothes were the first priority. A fire (producing more smoke than flame) was talked into cooking a few steaks. We all then crawled into our sleeping bags to escape from the cold and to sleep off the tiredness.

The following morning it was still raining and our first desire was to erect a permanent base camp. An excellent campsite location was found on a bluff overlooking the river. A fire pit was dug, our tarpaulin erected and our tents set up. Our wooden food boxes were stacked on their sides wherein food was arranged as in cupboards. The camp soon took on a cosy inviting atmosphere as a thin trail of smoke drifted through the trees. Our first billy was boiling.

The real work soon began. Rhys, Kevin and Don decided on the location of the dig. I commenced a vegetation survey of the

locality and Barry investigated possible helicopter landing sites up the river. We had been informed before we left Hobart, that Bob Burton would guide a TVT6 film crew into the site during our work there.

On Wednesday the actual digging commenced. Everyone was employed as a link in the chain from the excavation to the sieve and over the next days of digging we were to alternate duties. We found it was much more efficient to wet sieve the material rather than dry sieve it. The wet sieving was done in the river down by the boats. By early afternoon plastic bags full of stone tools and animal bones began to pile up. These "finds" comprised the overwhelming proportion of the buckets of excavated material tipped into the sieve. The friable loamy matrix "melted" away after only a couple of washes, revealing glistening stone tools of handsome quality, along with huge amounts of broken bone. Despite the awkward conditions involved in sieving, especially on the days it was raining, each person taking his turn was constantly delighted at each tray of material. It became totally absorbing picking over the trays before emptying them into the bulging plastic bags. The bags piled up at an astonishing rate.

In the cave the stratigraphy began to show a complex pattern of alternating layers variously comprising burnt clay, charcoal, bone and tools, with occasional sterile layers, sometimes interleaving.

The evenings after work were always happy times. Occasionally, some of the party worked late into the evening in the cave completing a spit excavation or measuring and taking notes. When there was still light after our work, time was spent sitting quietly on a bluff overlooking the river, quietly infusing our consciousness with the incredible beauty of the wilderness. As the towering silhouettes of the rainforest beside the river darkened, it was time to return to the warmth and cosiness of the fire. We had made ourselves very comfortable there. The sounds of sizzling frying pans and bubbling billies at the evening meal



were always accompanied by good humoured conversation. Rhys' endless stories may sometimes have been textbook examples of hyperbole but they certainly drew laughter out of us until our mouths were dry and our sides were aching.

Thursday rolled upon us. Barry and Kevin were usually out of the sack first. The steam rising from a fresh brew and curling softly into the early morning light was a welcome sight to the stragglers. Rhys and I took a turn in the cave while Don sieved. Barry and Greg continued their accurate surveying of the cave, and Kevin recorded observations on the cave's geomorphology. Due to rain the previous night and a rising river, Barry and I later headed upstream to look for an alternative helicopter site. We proved correct in suspecting that the one originally chosen would be under water. We were beginning to be sceptical as to whether the film crew would arrive.

The plastic bag of "finds" were being stacked at the campsite alongside the food and they were looking like a large wall. We began to worry about how to get the stuff safely back to civilisation. Certainly we reduced our luggage by the food we ate but this in no way compensated for the huge pile of archaeological material. We had arrived at the site clinging like wet rats to the top of our gear piled aboard a small duck punt and a rubber dinghy. Both had minimal freeboard. We knew however, that we would get our finds out even if we had to carry it all on our backs.

Movement about the campfire wasn't without its hazards. Dank, dirty and crumpled clothing hung from makeshift clotheslines under the tarp and near the fire. If you weren't careful to look where you were going you could easily get a faceful of somebody's drying underpants, hanging out for an airing after a few days of service. There was also the problem of accidentally wiping your nose on a pair of socks, or an old shirt would fall off the line and come close to landing in the stew.

The sound of heavy rain on canvas awoke us on Friday morning and it wasn't to cease all day. Unfortunately for me it was my turn to sieve and I just put my head down and became absorbed in the work ignoring the potentially miserable situation. Water obscured my vision through my glasses and trickled over my face, while heavier rain forced itself through the seams of my japara. An occasional piece of Darwin glass or some other interesting object in the trays served to channel my thoughts into quiet and comfortably narrow contemplation. A large billy of hot water was kept next to the fire all day so that hot mugs of tea could chase away a little of the coldness.

Saturday came with fine weather and we were already engrossed in work when someone reported hearing a helicopter. Soon it appeared right above us, hovering, circling and then headed up river to land. The chopper disgorged it's passengers out of sight upstream and Barry raced off in the punt to pick them up. The rest of the day went quickly as we continued our work at greater pace in order that we might accomplish our task before leaving the camp the following day. Work was performed partly before the camera and was punctuated by interviews and explanations on film. The helicopter returned later in the day to pick up its passengers and we leapt at the offer to carry out the large weight of bags of excavated material.

Sunday came too quickly. Breaking camp is always a melancholy event. Bob burton of the Wilderness Society stayed behind after the helicopter had left to volunteer his assistance. We were glad of the extra pair of hands, particularly during the portages on our homeward voyage. It rained heavily on Sunday and the Franklin River rose steadily. By the time we reached the Gordon we were all chilled by the cold. Camp was made overnight on the Lower Gordon River amid the squalor of an abandoned H.E.C. campsite.



On Monday we finished our journey by tourist launch, arriving in Strahan late in the day. News of the finds had already been broadcast on television and radio. The whole team sat down to a hot dinner in the Strahan pub that night and with great satisfaction, toasted the success of the trip.



*Fraser Cave entrance. A magnificent setting amidst cool temperature rainforest.*

## FRASER CAVE DATE

K. Kiernan

Charcoal from the basal occupation horizon in Fraser Cave has been assayed by the A.N.U. radiocarbon laboratory at  $19,000 \pm 1100$  BP (ANU 2785). This implies that man was present at Fraser Cave before the onset of glacial conditions during the late Last Glacial Stage, dated at shortly after  $18,800 \pm 500$  BP (ANU 2533) from the central west coast range (Kiernan 1980).

Whereas literally only a small handful of Pleistocene stone tools had previously been recorded from Tasmania, the Fraser Cave find and date changes the situation dramatically, with probably hundreds of thousands of tools present in the cave. Some of the upper horizons may of course still be Holocene. The extraordinary richness of the find, together with its great antiquity, are of immense interest. Moreover if the magnitude of the standard deviation reflects contamination of the mineralised charcoal by humic acid from the surface, the true date may be slightly older than the assay result.





*Left.*

*Exploration of limestone areas such as this have revealed the presence of many limestone caves along the Gordon and Franklin Rivers.*

*Below.*

*Numerous stone tools and split bones were found in every bucket of excavated material.*





## CAVE ARCHAEOLOGY - THE TASMANIAN POTENTIAL

Don Ranson

Caves have long held an attraction for man, acting for thousands of years as focii for his occupation, industry and ritual. With the recent confirmation of the presence of archaeological deposits in Fraser Cave (Anon, 1981a,b,c; Brown, 1981; Dywer, 1981; Harris 1981a; Kiernan, 1981; Roberts, 1981) first noted simply as a "bone deposit" by Mr. Kevin Kiernan (Middleton, 1979a,b) following his rediscovery and subsequent naming of the cave in 1977, it is perhaps pertinent to discuss the range of past human activities that may be found in Tasmanian caves. Such a discussion may not only help to increase the awareness and enjoyment of caves by cavers, but will hopefully stimulate further exploration for evidence of this island's exciting past.

Caves have offered through time fixed and reliable areas for protection and shelter. They have also inspired a certain awe and reverence which has led in the past to their association with ritual and magic. (It may not be an exaggeration to suggest that this association continues to this day given the peculiar habits and customs of some elements of our society in crawling around in them!) This continuing use over the years has caused, in particularly favoured caves, metres of well preserved man-made deposits to build up on their floors.

Archaeologists are therefore particularly attracted to caves, for while man has continued to occupy many niches in the environment, it is caves, by their very richness and ease of identification in comparison to "open sites" that enable the researcher to focus more readily into the past. In fact most of our present understanding of Tasmanian prehistory has been gained through the examination and excavation of caves and rockshelters (Jones, 1966:2-6, 1971; Bowdler, 1974a, b, 1975, 1979; Goede, 1977a, b; Vanderwal, 1977; Murray *et al.*, 1980).

It cannot be overemphasised how important caves are to the archaeologist. By their very nature they confine and channel human activity and the deposits thus formed offer concentrated palimpsests of human endeavour



extending back over thousands of years. These huge storage systems of archival material offer a tremendous potential for reconstructing the past lifeways of human groups. The recent exploration of Fraser Cave for example has suggested (at a conservative estimate) that its deposits contain over 150 million individual finds of bone and stone. This is a rich cave, certainly Australia's archaeologically richest limestone cave and probably ranking in the world's "top-ten". In terms of the information it contains, it can be considered as an archaeological "Library of Congress".

It should not be thought that archaeologists are interested only in these prime sites. Even caves with a limited deposit or a small scatter of artefacts interest the researcher. To extend my previous analogy further, such small groups of finds can be considered as important "chapters" in the story of the past. As archaeology moves away from the simple antiquarianism of the early part of this century, the "collecting for collecting's sake", and more towards being a science in its own right, more information is able to be extracted from less and less. A fragment of bone for instance, can be readily identified as to the species of animal it originated from. A small collection of bones can provide information in hunting strategy; what species of animals, age, weight and sex were preferred. From such a collection, reconstructions of the inhabitants' diet can be made, their efficiency as hunters, their butchering practices - even the season of the year that they made a particular kill. Similarly, the stone tools they left behind can inform us as to their aptitude as artisans, their knowledge of the local geology, their trade and transport routes for exotic material, even some researchers claim - the identification of particular individual toolmakers by their characteristic "fingerprint" or unique way of flaking stone.

I do not intend to dwell on archaeological methodology, but mention the potential that is held by even a single find in order to stress to readers the interest of archaeologists in the apparently mundane, and to encourage the reporting of any discovery or observation (see author's note at the end of this article). And for those of you who wish to extend your interest in cave exploration further to include the search for archaeological

deposits I have outlined in the remaining part of this article a simplified "Identikit" method for discovering and indentifying caves of archaeological interest.

"Caves" mean different things to archaeologists than they do to speleologists. Perfectly respectable caves from the speleological viewpoint might be shrugged off in passing by archaeologists (e.g., Harris, 1981b:5). Caves that may be dismissed out of hand by speleologists will attract the avid attention of archaeologists for weeks. For instance, dark damp caves with large bodies of water in them would have been avoided in the past being too uncomfortable for prolonged occupation. Large, dry, well-lit caves offering good prospects may also be archaeologically sterile simply because they have been flushed out periodically by flowing water. Conversely, relatively open "rockshelters", that is, areas below overhanging cliffs or large boulders offering shelter for wind and rain may be eminently suitable, yet would not readily attract a caver's attention.

\* \* \*

Archaeologically interesting caves fall into four general categories:

1. Horizontal caves found in karsts.

Usually well-lit chambers with fairly open accessible entrances. Occupation may be found to the rear, especially if secondary roof entrances provide light. Ideally are dry, though many contain small bodies of running water. Not subject to periodic flooding and consequent destruction of deposit. Usually associated with a distinct earth talus at the entrance. No specific size - entrance chambers can vary from a few square metres in extent with little head-room, upwards in size.

2. Horizontal Caves.

Found in pseudokast. For example sea caves in dolerite. Specifications as for (1).

3. Rockshelters.

Usually found in sandstone country though common wherever the topography provides overhanging cliffs, large hollow at the base of cliffs, or large boulders under which a dry, sheltered area can be gained. This type would probably not be defined as a "cave" by speleologists.



#### 4. Pot-holes or shafts.

Found in karst. Not inhabited, but by their very formation act as natural traps for animals and material. The deposits at their base provide ancillary information for the archaeologist, e.g., evolution of fauna, climatic and vegetation change, charcoal for dating methods, etc.

\* \* \*

Once a cave or rockshelter has been identified as having the potential for occupation, further examination should be made for actual evidence of man. The evidence falls into five main categories:

- a) FIRE. Presence of distinct dark, ashy, charcoal-flecked areas would suggest hearths. They may be the result of recent European occupation but are more likely to be Aboriginal. If no dark areas are present look at the roof and cave walls for presence of soot marks from fires now buried by more recent deposit.
- b) CAVE FLOOR. Unoccupied caves generally have a lighter coloured floor deposit than the parent rock. However, light colouring may be due to recent material having been deposited on an earlier occupation deposit which it is now hiding. Occupied caves generally have a dark floor material sometimes slightly greasy to the touch. Very fine flecks of charcoal may be present in the soil.
- c) FAUNAL MATERIAL. Bones can be transported into caves by non-human agencies. Animals enter caves to die or are brought in to be eaten by other animals. However, in general the larger the animal bones the more likely it is that they have been brought in by man. Note especially wallaby and wombat remains. Long bones of the larger animals that have been split or fractured have almost certainly been broken by humans to extract the marrow (Fig. 1). Charred bones, usually black in the exterior, grey-white and calcined on the interior surfaces are highly likely to be remains from ancient cooking fires. Bones may vary in colour from light yellowy-brown to dark brown or black. Certain bones, usually wallaby fibula are sometimes sharpened at one end to form tools (Fig. 2). The presence of sea shells in coastal caves is often an indicator of human occupation.
- d) STONE. Can be naturally derived from the roof of the cave or be

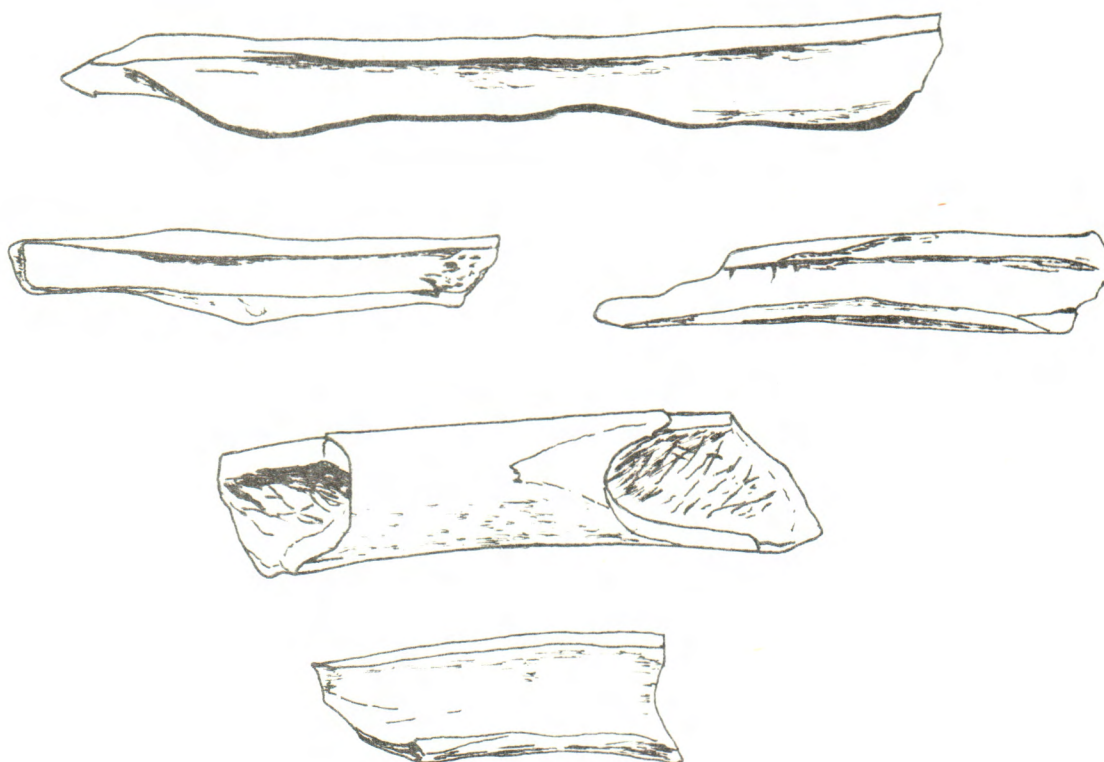


Fig. 1 Examples of split wallaby long bones that have been split to extract the marrow.

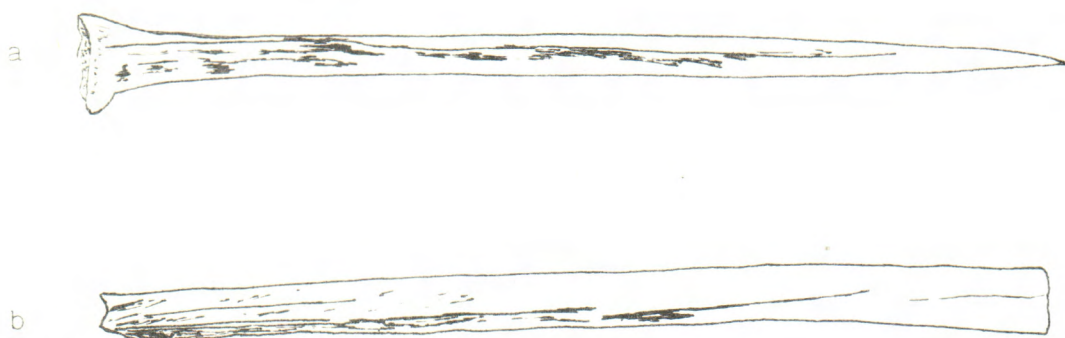


Fig. 2 a) Wallaby long bone sharpened at one end to make a "bone point".  
b) Bone ground at one end to form a spatula.



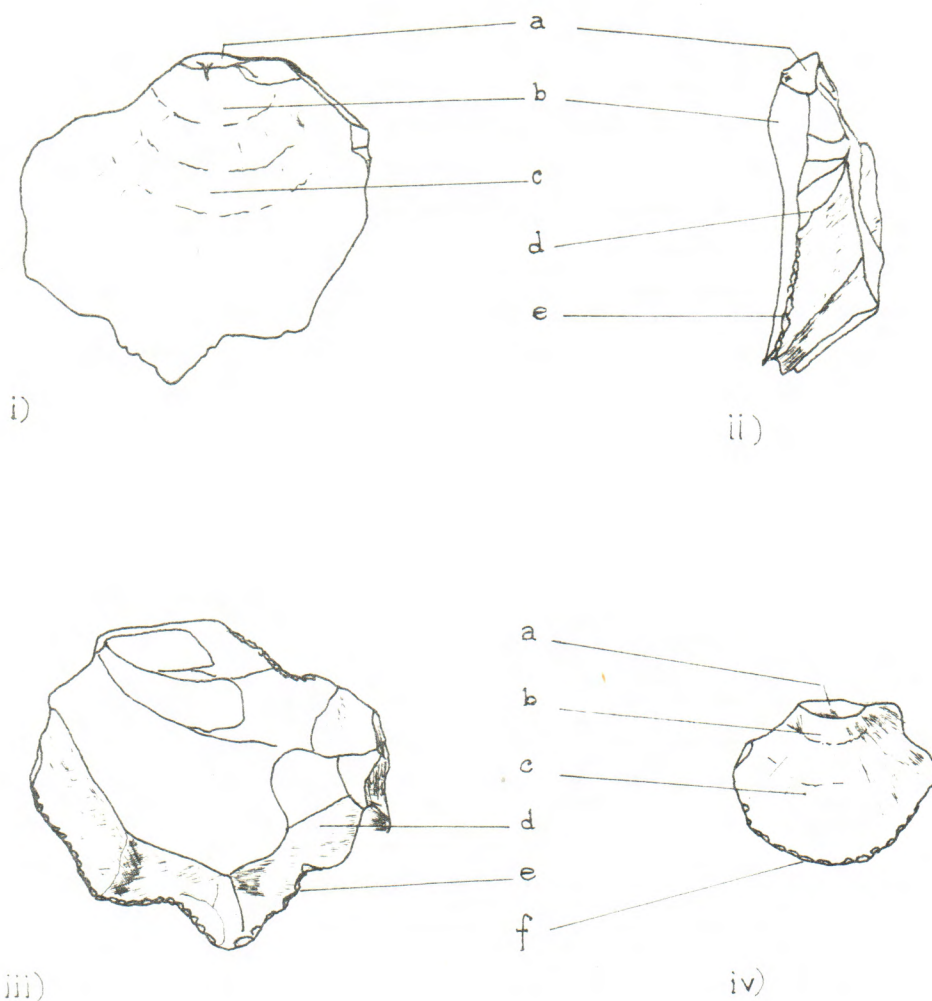


Fig. 3 Examples of stone tools. (i-iii) various aspects of a "notched" scraper, most likely used for planing back of a branch to form a spear. iv) simple flake that could have been used in cutting.

- (a) striking platform - where hammer stone was brought down on parent rock to form tool blank.
- (b) convex "bulb of percussion" typical of any struck rock.
- (c) stress lines resulting from hammer blow.
- (d) "secondary flaking" produced when the tool maker modified the simple stone blank.
- (e) "retouch" a form of gentle flaking in order to produce a more efficient cutting or planing edge.
- (f) "nibbling" often found on simple flakes and resulting from wear during use of implement.



Fig. 4      An example of a hand-stencil produced by spraying ochre from the mouth on to the cave wall; the person's hand being used as a stencil.



washed in by ground water. Any exotic stone not found in the immediate locality but present in the cave is highly likely to have been transported into the cave by humans. If the stone has been flaked (Fig. 3) then this is the best proof that human occupation or activity has taken place. Skeomorphs of stone tools in bottle glass made after the Aborigines' contact with Europeans may also be present.

e) ROCK ART. Can be of two types: paintings or pecked engravings of circles, lines or rows of dots (Figs. 4 & 5). No rock engravings have yet been discovered in Tasmanian caves. Only two painting sites which exhibited hand stencils, have been found (De Teliga and Bryden, 1958, Stockton, 1975). Rock art is common on the mainland and further Tasmanian examples are bound to come to light as cave exploration progresses.

\* \* \*

Before entering a cave, examine the talus for eroding areas to see if any stone flakes or bones are present. Caves were used for shelter at night and in periods of inclement weather. During the day many activities occurred outside the mouth of the caves and artefacts would have been deposited around the entrance outside the drip line. On entering the cave closely examine the cave floor in the naturally lit areas for remains of fires and artefacts. If dripping water from the roof has washed hollows in the cave floor, look for evidence that may have been revealed.

If stream beds are present, check them for artefacts that have been washed out of the deposits. Examine the sides of the gullies for artefacts eroding out of the sections. Moving into the cave check the roof for soot marks and the base of the walls where concreted artefacts and "bone breccia" may remain. Examine the walls for art. If areas to the rear of the cave are illuminated by daylight entering through secondary passages in the roof, examine these areas carefully as they could be likely activity areas. Finally as you pass into the deeper recesses of the cave there is still the faint chance that evidence may be present. In some cases ritual evidence, engravings, paintings, artefact caches, have been found many hundreds of metres in from cave entrances.

Of course written instructions can never take the place of on-site field

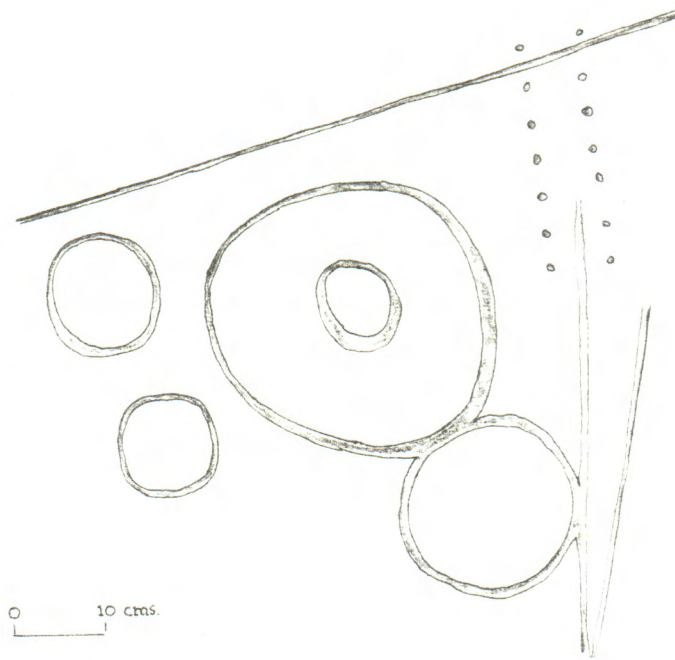


Fig. 5 An example of rock-engraving produced by pecking at the rock with sharp, hard stone.

training. Yet it is almost a truism that many archaeological sites are not found by trained archaeologists but rather by interested members of other professions and occupations. In a specialised field such as this, where very few archaeologists are also cavers, it is still possible for members of the caving body to make major discoveries. This is especially so of Tasmania where the potential for cave archaeology is only just being realised.

\* \* \* \* \*

#### Author's Note

It is illegal to collect or excavate for aboriginal artefacts without a permit. It is also ethically wrong for an artefact to be taken out of its context. Only the artefact within its context can help archaeologists understand the past. If you find evidence of early man don't disturb it. Instead record it by way of notes and/or photographs and contact:

National Parks and Wildlife Service,  
P.O. Box 210,  
Magnet Court.  
Sandy Bay. 7005

Tel: 30 6487



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## AREA REPORTS

Stefan Eberhard

### MOLE CREEK

In early January Steve Harris led Stefan Eberhard, Phil Jackson and a visitor on an upstream exploration trip to Herberts Pot. No new passages were found although Paragon Vaults was visited.

The 24th January was the beginning of a three day trip to this area by Leigh Gleeson, Rolan Eberhard, Aleks Terauds and Phil Jackson. Low water levels ensured a through trip from Georgies Hall to Dangerous cave where some talus bashing resulted in the discovery of 100m of spacious stream passages. Downstream Herberts Pot was also patronised but no notable discoveries were made.

### IDA BAY

Big Tree Pot (IB9) was located by T.C.C. in 1967 but not entered until January 1980 when N.U.C.C. descended a series of pitches (30m, 15m, 12m, 12m respectively) before being halted on the edge of a big drop.

On Christmas Day, 1980, Stefan Eberhard accompanied David Barlow, Carey Mylan, Mark Wilson, Shane Wilcox (S.S.S) and Ed Garnett (C.T.C.G.) on the further exploration of this cave. Optimistically, 70m of rope was lowered down the drop but another 50m had to be added before the bottom was reached. David and Shane abseiled into a 110m shaft of massive proportions. It was confidently assumed that IB9 would lead into Exit cave but progress was unexpectedly halted at a grotty, muddy sump some 200m down (see tackle description and map in J.S.S.S., 1981, 25(2)).

In early January Stefan and Rolan Eberhard explored a spectacular 42m

shaft on the northern side of Marble Hill. The hole was dubbed Holocaust (see survey elsewhere in this issue). A search for Hobbit Hole and Relevation cave proved fruitless.

The following month, the same party entered a small hole (1004) located close to Mini Martin. A 15m pitch followed immediately by a 30m drop onto a small ledge brought an impressive view of the main pitch in Mini Martin - 1004 is the origin of the large fissure in Mini Martin. An extra 50-60m of rope would be required to continue right through to Mini Martin proper. On the 1st March, Fred Koolhof and Steve Harris exposed some film in Exit Cave. One elaborate multiflash exposure of the stream passage took half an hour to complete.

#### JUNEE/FLORENTINE

In late December, Stefan Eberhard participated in a trip to this area with David Barlow, Carey Mylan, Shane Wilcox, Mark Wilson (S.S.S) and Ed Garnett (C.T.C.G.).

On the 27th Cauldron Pot was bottomed by Stefan, David, Mark, Shane and Ed in an enjoyable six hour trip. Relatively high water levels in Khazad-dum made for a wet but sporty eleven hour trip for the whole party, on the 29th.

On the following day Stefan, Ed and Mark visited Serendipity. The undescended waterfall pitch was surpassed and the narrow meandering streamway followed down via 4m and 15m pitches to a significantly larger drop. Lack of gear prevented the descent of this obstacle. A return trip the next day with David, Carey and Shane had to be aborted due to a car breakdown. Ed and Shane were therefore given the epic task of derigging the cave.

Further exploration of Serendipity by S. Eberhard, R. Eberhard, P. Jackson,



G. Fisher and N. Hume (T.C.C.) only resulted in a partial descent of some 30-40m down the 5th pitch. The estimated depth of the cave is at least 200m with very good prospects for greater depths.

Phil Jackson was among a party of T.C.C. bods and W.A.S.G. members which surveyed and explored in the lower sections of Growling Swallet on the 17th January.

On the 28th February Stuart Nicholas led a party of Geoff Fisher (T.C.C.), Rolan Eberhard and Stefan Eberhard to The Chairman where several hours were spent pushing further downstream in this very extensive system.

Acknowledgments must go to the sherpas, Trevor Wailes, Malcolm and Bruce.

The 14th March saw a trip to the Florentine Valley where Andrew Briggs (T.C.C.), Stefan Eberhard and Rolan Eberhard visited the horizontal extension in Tassy Pot, recently discovered by S.U.S.S. The significance of the discovery was certainly verified with the negotiation of at least a kilometre of spacious, decorated stream passage. Numerous side passages remain unchecked. A downstream extension was found, encompassing some 150m horizontally and perhaps 10m greater depth.

In early April, S. Eberhard led a visitor on a trip to a swallet hole located on a previous scrub bashing trip. A cold, wet 25m pitch was laddered to a depth of 60m but continued descent of the Ice Tube was halted at a 30m plus waterfall pitch.

On April 11th, Rolan Eberhard, Stefan Eberhard and Andrew Briggs (T.C.C.) formed a small team which bottomed Khazad-dum via the Dwarrowdelf route in 9 hours.

#### GOODWINS CREEK

Over the 6th, 7th and 8th February, Kevin Kiernan, together with Bob

Burton and Bob Brown, visited this previously unexplored limestone area which is currently under threat by the Gordon below Franklin H.E.C. project. Goodwins Ck. itself was found to sink into a cave 300m long whilst time did not permit the examination of other cave entrances. Exit was made through the impressive Jane River gorge.

#### FRANKLIN

On the 9th and 10th February, Kevin Kiernan, Bob Burton and Bob Brown visited Franklin cave, Bingham Arch and Fraser cave; finding abundant evidence of aboriginal occupation in the latter.

#### SPENCE RIVER

This new limestone outcrop was located by Kevin Kiernan on the west bank of the Spence River, south-west of Mt. McCutcheon. A small, impenetrable efflux was found.



## ILE DU GOLFE

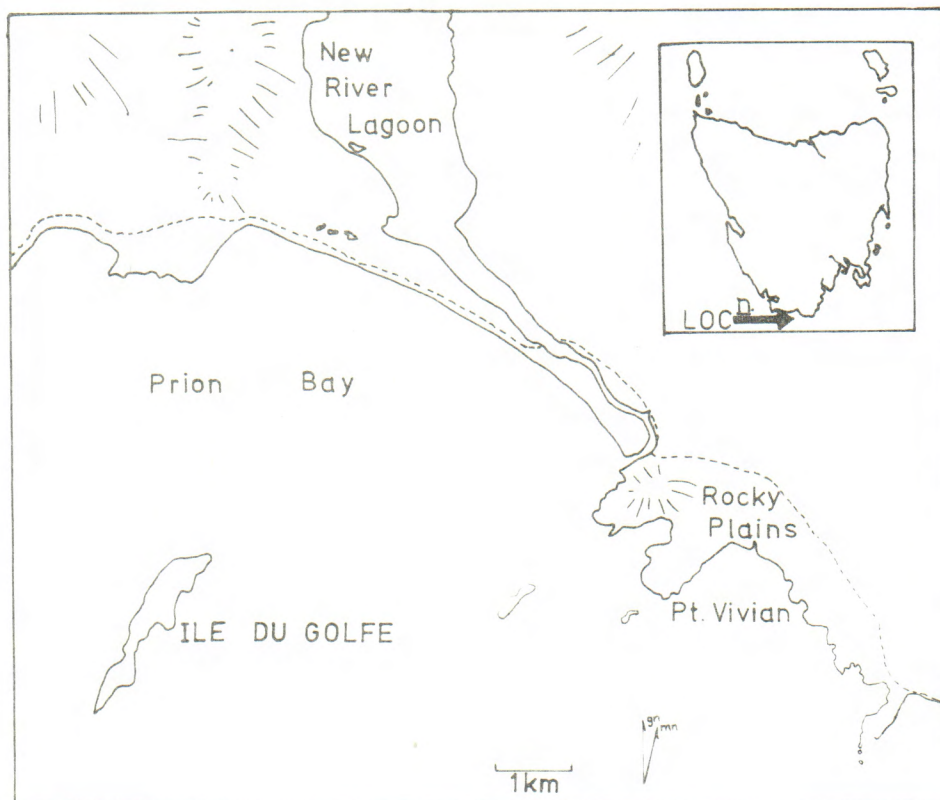
Stefan Eberhard

ILE DU GOLFE (Island of the Gulf) as Nicolas Baudin named it on 13 January, 1802, is located off the far southern coast of Tasmania. It is composed entirely of Gordon limestone which thrusts impressively out of the Southern Ocean to an elevation of 120 metres. The vegetation is predominantly tussock grass with some patches of tea-tree scrub. The island is also a natural haven for sea birds.

It was whilst returning from a fishing trip to Port Davey in January 1981 that I and Rolan Eberhard had the opportunity to visit this remote limestone outcrop. Unfortunately, very strong sou-westerly winds limited the visit to only an hour.

The limestone is dark blue-grey and steeply dipping whilst the few caves found, apparently former sea caves, did not penetrate beyond daylight. The only karst development observed was some isolated rillenkarrren.

Although the small section of island examined did not yield any positive sightings of good caves it cannot be certified that there are no significant solutional cave systems on ILE DUE GOLFE. The island is 2.6 km long but perhaps only 500m across at the widest point, so the corresponding small area of water catchment would inhibit fluvial karst development. Further scrutiny of the island for sea caves needs to be carried out.





# HOLOCAUST - Ida Bay

## Developed Longitudinal Section

Scale  
1:200

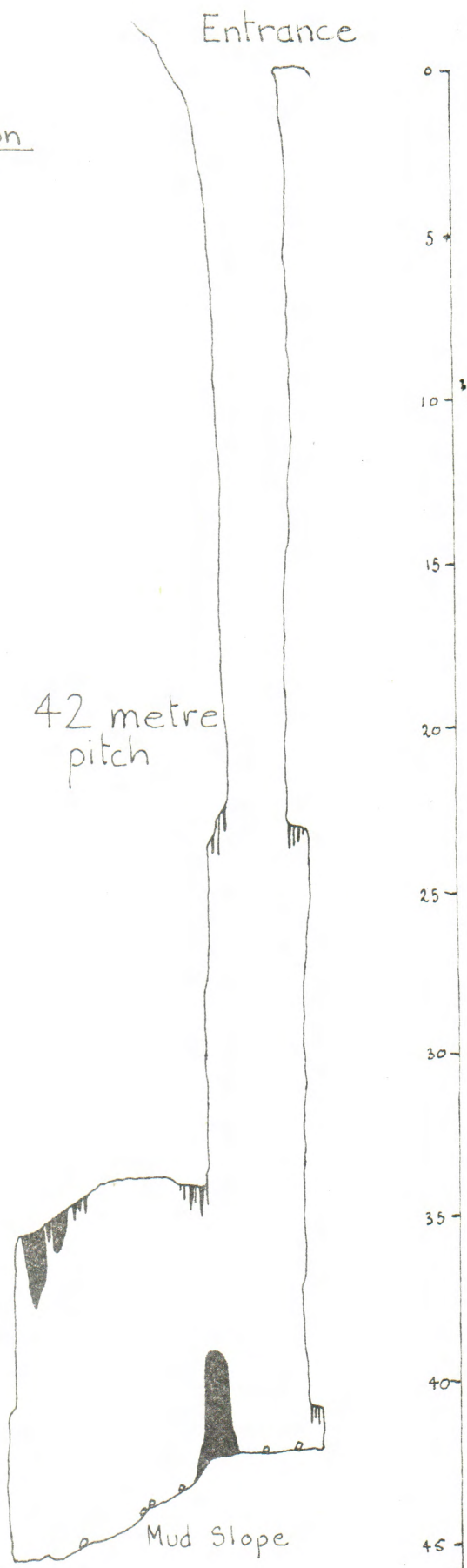
0 1 2 3 4 5 6 7 8  
metres

ASF Grade 43

42 metre  
pitch

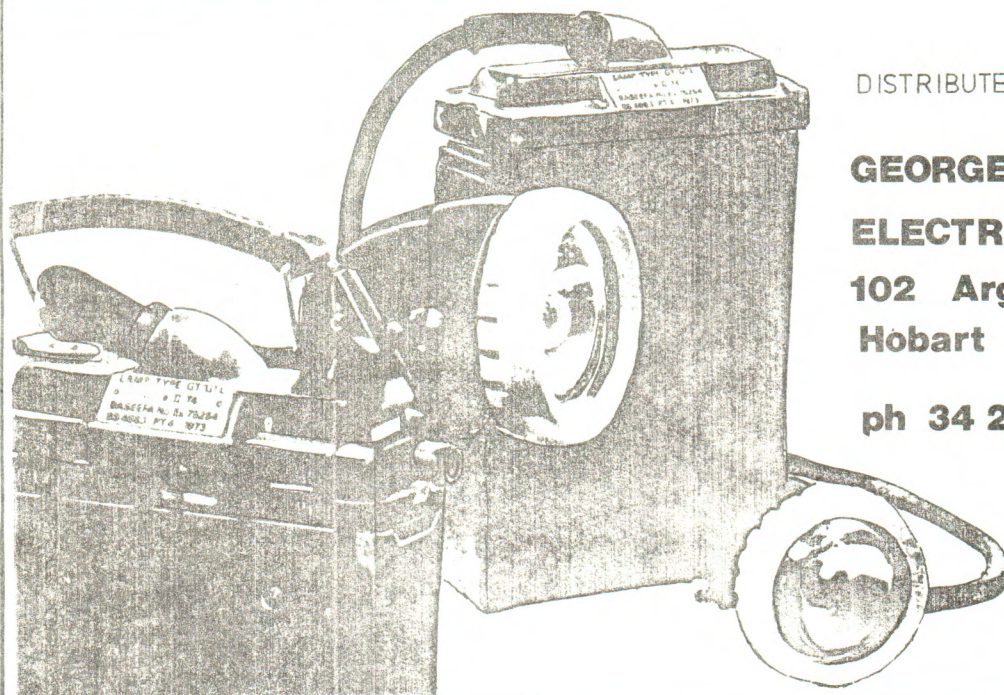
Flowstone

Surveyed Jan. 1981  
S. Eberhard  
R. Eberhard





## CAP LAMPS

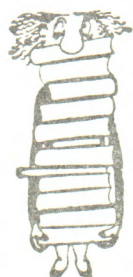


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#### How to 'Survive' an avalanche:

1. Be prepared at any time, on any slope. Study the contours, listen and watch for any movement in the snow cover. If you are aware of the situation, you are much less likely to suffer from shock when the danger occurs and much more likely to be able to take the correct action.
2. The moment a slide occurs, give warning to the rest of the group.
3. Decide immediately on the best possible way of getting out of the danger.

#### Possibilities:

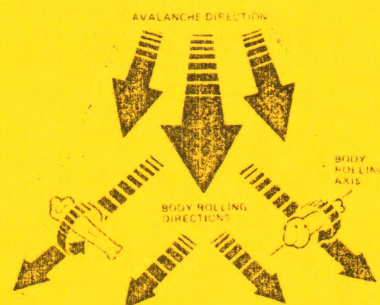
4. If you are caught close below the 'breakaway line' in a small wind-slab or powder snow slide, you can often just stand your ground with feet together in the line of the slide and supported by your ski-sticks. This is only a possibility before the avalanche has gained momentum.
5. In all other cases, you should always try to ski out of the avalanche on a fairly steep traverse to the nearest safe place, on a ridge or among rocks etc.

6. If neither of these courses of action are possible, the first requirement is to get rid of your skis and possibly rucksack. It is most important to have bindings with sideways release even in the climbing position. Then a quick twist of the feet will get rid of the skis. Safety straps should always be undone when crossing a slope that might slide and bindings should not be set too firm.
7. As soon as the avalanche is triggered, you must start rolling down and across the slide towards the nearest way out. This rolling action is like a cylinder would roll and is initiated by the sideways twist that gets rid of the skis. Try to gain speed by using your arms and legs to assist the rolling action. Even if you are covered with snow, you should still be able to continue rolling and this action will keep you close to the surface.

**DO NOT GIVE UP**, the last few rolls towards the edge of the slide may just save your life. If you have not already rolled out at the side, it is especially important to keep rolling as hard as possible just before the avalanche reaches a stand still.

At all times, whilst rolling, try to keep yourself orientated so that you know where the edges of the slide lie. This method should be used in any kind of snow but, if you are covered in heavy wet snow, the chances of survival are very small.

I have tried to get out of avalanches in several other ways, but never so successfully as with the 'Rolling' technique. Often one hears of the 'Swimming' method being advised, but I have found it impossible to gain enough speed to remain near the surface. The snow overtook me and I was buried. I have also tried 'Somersaulting', but one loses all sense of direction.



#### Why does 'Sideways Rolling' technique work?

Even in very loose powder snow, you will find that there is enough resistance to be able to 'Roll'. This will get you moving faster than the snow-mass and will keep you on or near the surface. As soon as you lose momentum, you will sink and the snow building up behind you will cover you. Even while covered by a layer of snow overtaking you, 'Sideways Rolling' is the only possible method of regaining the surface.



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