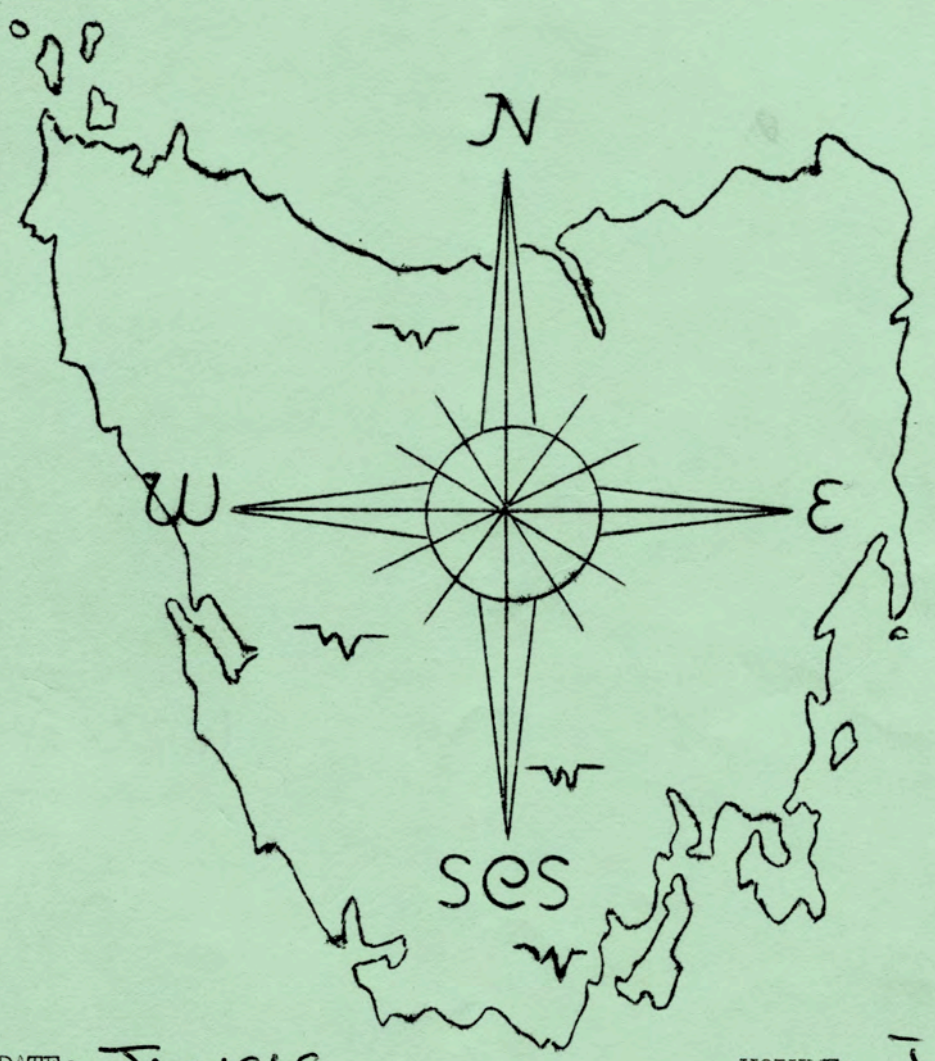
SOUTHERN



DATE: JAN 1968

VOLUME: 1

PRICE: 25 cents

NUMBER: III

CAVER

Published by the Southern Caving Society.
139 Augusta Rd., Lenah Valley, Hobart,
Tasmania. 7008

SOUTHERN CAVER

Volume I Number 3

November, 1967 - January, 1968

CONTENTS:

PRODCTION:

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Duplicating:	National Fitness Council of Tasmania.

TRIP LIST			PARTICIPANTS
November:	4	Hastings	(4)
	26	Hastings	(5)
December:	2 — 3	(Hastings	(4)
		(Mt. Ronald Cross	(3)
	16 — 17	Hastings	(14)
	23 — 30	(Mt. Ronald Cross	(3)
		(Gunn's Plains	
		(Mole Creek	
January	1	Ranelagh	(5)
	13 — 14	(Mole Creek	(4)
		(Hastings -	(2)
		Adventure Camp	
	16	Adventure Camp	(2)
	20	" "	(12)
	21 — 26	" "	(4)
	27 — 29	Mole Creek	(10)

NEW CAVES

Hastings: 130ft Pot.

As yet un-named, situated in a gulley on N.E. side of hill behind Newdegate Gave. Access gained via Chesterman's Road.

Mt. Ronald Cross:

Aquarius Swallet.

Virgo Cave

Both situated on edge of plateau facing Mt. King William.

COLLECTIONS

Insects: A professional entomologist having joined the ranks has caused an increase in the ever present interest in this field. Collections include a number of flies, three specimens of harvest-man, assorted springtails and slaters and several specimens of millipede. Two specimens of pseudoscorpion are being described. Several further specimens of the beetle mentioned in Vol. 1 No. 1 have been collected. Further examination of this beetle has disclosed an error in the original presumed identification. The editor apologises for any inconvenience this may have caused. The specimens will be forwarded to Dr. E. B. Britton for identification as the family is definitely Carabidae and the specimens show a degree of cave adaption.

Bones: The bones previously collected from Cork Hole and Sun Cave (Mole Creek) have been identified. Seven species were represented among the collection but were all common-place residents of the area. However, one cannot expect to find bones of extinct animals in every cave.

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AREA REPORTS

Hastings: Due to the Society's involvement and contribution to the Adventure Camp conducted by the National Fitness Council of Tasmania over half of the trips for the quarter were conducted at Hastings.

Original work has been continued on the N.E. side of Newdegate Cave Hill. Access is gained by Chesterman's Road which leads from the tourist road to and along the top of the hill out wet weather makes driving rather tricky. Some maintenance work has been done to the road surface, particularly one large culvert which was collapsing.

A deep pot has been discovered and explored to a depth of approximately 130 feet.

The initial fifty foot drop may be avoided by a crawl through a series of fissures between talus blocks. A narrow squeeze leads from a ledge to a sixty foot free ladder pitch into a tall bell-shaped chamber. This chamber has a clean solid rock floor. A low sloping passage leads off for about fifty feet until it becomes choked with gravel.

During a trip in November while preparing for the Adventure Camp a Society party visited Mystery Chamber in Newdegate Cave. At the time of entry no water was audibly flowing past Kings Hall and the creek bed behind Mystery Chamber was dry when the party arrived. A series of disturbing gurgling sounds caused a hurried ascent to higher levels. Investigation found that the creek had risen to normal flow eight in the space of five minutes which illustrates most impressively the unpredictable nature of underground water movements.

Hastings (Cont.)

A "Dads Day" enabled several fathers to understand the reasons why and how their sons return from a caving trip tired, dirty and usually wet but with a happy gleam in their eyes. Mr. and Mrs. Roy Skinner were most obliging hosts for the Society's Christmas celebrations that evening. An enjoyable time was had by all and the Society expresses its gratitude.

Mole Creek:

This area, though not visited particularly frequently this quarter, still holds great interest and attraction. Trips have been spread through eight different caves and systems with original Society work being continued in Herbert's Pot.

To mark the end of 1967, three members, freshly arrived from the West Coast via Gunn's Plains, warmed up to a scrub-bash at Liena by a two and a half hour trip through Cow Cave to Pyramid Cave and an inspection of Toboggan Cave for the benefit of the novice member of the party.

Visitors Phil Leisk and Sue O'Donnell from U.Q.S.S. were guided through some of the Mole Creek attractions on the weekend 13th - 14th January. After marvelling at the size and substance of S.C.S. breakfasts they were guided through the "Tourist" trip of Georgies Hall to Eldorado Chambers via Root Hall to the syphon and then down Sennacheribs Passage to Georgies Hall proper and back to daylight via Eureka Link and Wet Cave. After a cup of coffee and a refit of lights the party went to Cow Cave and back to the surface through Pyramid Cave. Returning to camp for another cup of coffee and this time a sandwich, the team then set out for Maracoopa Cave where the inspection culminated with a trip through the Fire place to Mary's Squeeze and surrounds.

Back at camp at one o'clock in the morning the U.Q.S.S. members realised why breakfast includes five plus courses and supper has a similar menu.

Intensive scrub-bashing on a number of occasions has resulted in the location of a small draughty entrance on the side of a large doline at Liena. On the 27th January, 1968 four members retired from daylight to find a talus slope under the mud floor of the entrance chamber. A rope enabled a lower chamber to be reached. Some time was spent in finding a continuation into a flowstone section. A chimney leads into a low passage where a twenty foot ladder pitch reaches a large talus chamber. A further two ladders enable an easy climb over talus blocks to a stream passage.

This point can be reached with less equipment but ease and safety were more attractive. Evidence of previous exploration could be seen at various points.

Mole Creek (Cont.)

Herbert's Pot has been the scene of the major work and discovery at Mole Creek for the quarter. During the long weekend at the end of January many new features and sections of this cave were discovered downstream from the waterfall below the junction with the main underground stream. Intensive investigations were made from the large talus chamber below the waterfall to and over the syphon at the end of the stream passage.

At approximately one third of the distance to the syphon a partially collapsed upper section containing good formation was discovered. An offshoot was explored but terminated in a mud choke.

While trying to find a bypass around a deep pool in the stream a mud slope was climbed and a further section of upper level was discovered. Containing some impressive formation, the level extends both upstream and downstream. In the up-stream section a low passage runs for about forty feet before choking off with mud. Towards the downstream end several lengths of broken column were found. These were between two and three feet in diameter and had been broken for a very long time. The level extends downstream far enough to enable the pool to be avoided but the climb back to the stream passage involves some treacherous ledges.

Below this point a small tributary enters the main stream. Full investigation of this passage was left to a later date.

A chamber previously found on an upper level near the syphon was re-explored without success but further investigation of the level led through a cleft into a very large sand floored extension. Good formation displays were found and an extremely strong draught was found blowing through a small triangular hole between the formation at the end of the chamber. This air movement was strong enough to extinguish candle flames twenty feet from the constriction and could be heard some distance away.

Careful enlargement allowed access to a small chamber of very pretty formation. This chamber opens into a large chamber filled with talus blocks. Although the typical talus maze is present prospects for continuation are quite good.

As the known limits of this cave are becoming increasingly widespread the time factor is a problem. An active exploration trip now takes in the order of fifteen underground hours to enable worth-while work to be done. A system of assault and support parties is being developed to facilitate increased efficiency in this system.

Mt. Ronald Cross

This area is becoming known as the land of extremes which yields its secrets by the barter system - one measure of information or discovery for ten measures of effort is a bargain.

During December, while camping at the tarn on top of the mountain one party had snow on their tents and ice on the tarn and the next had conditions so hot that they went swimming in the tarn to cool themselves.

Improvements to the area include clearing of the track previously marked from the Lyell Highway to the Surprise River, clearing of a track through the high ferns on the very steep grade on the first leg of the mountain climb and reblazing and maintenance to the track through the myrtle forest. Materials for a flying-fox across the river are at hand and will be installed next trip.

Investigations have been centred along and just below the edge of the plateau from the front of the mountain, a short distance to the right of the track through the myrtle forest, to the valley beneath the tarn.

Discoveries include Virgo Cave - a tight but apparently deep sink-hole and Aquarius Swallet. Investigations in Aquarius Swallet at Christmas resulted in the re-emergence of a bedraggled, sodden and semi-drowned member who was attempting to climb a ladder-pitch in the middle of an underground waterfall. Further progress will depend upon the construction of a temporary aqueduct to carry the water over or around the entrance as the surface stream would be quite difficult to divert away from its valley course.

Attention has also been given to the valley below the tarn and the mountain-side bank of the Surprise River downstream from the crossing point.

Walking times for the trip from the Lyell Highway to the tarn on the mountain plateau have ranged, according to weather conditions and the amount of equipment carried, from three and a half hours to six hours of steady slogging for an "as the crow flies" distance of a little over one mile. Altitude changes are five hundred feet from the Lyell Highway down to the river crossing and then sixteen hundred feet up and over to the tarn at three thousand one hundred feet.

In spite of all the difficulties, enthusiasm for the area is strong and although no place for the ill-equipped or “social” member, no difficulty is found in filling trips at every available opportunity.

Gunn's Plains

Gunn's Plains area was visited by three Society members during the Christmas break. The display section of the Tourist Cave was inspected with the guide, who was most helpful and explained the format of the cave and the surrounding countryside from a caver's point of view.

The cave follows the course of an underground stream whose passage may be followed for some distance past the tourist section. Large fresh-water lobsters have been seen in this stream. The tourist section is thickly decorated with high quality formation and is renowned for its shawls which are amongst the best examples of this type of formation in Tasmania.

Acting on information given by the guide the party also investigated a cave about one mile from the Tourist Cave on the opposite side of the valley. The first section of this cave entails a crawl between talus blocks along a dry creek bed which opens into a dry stream passage. The width of the passage varies between three and ten feet and the ceiling in places reaches approximately sixty feet.

The walls and ceiling are thickly encrusted with formation of all types and many colours. Flowstone reaches from ceiling to floor and shows a pretty gradation of colour, being a rich chocolate at the ceiling and tones through yellow to a brilliant white at floor level.

Further along the passage surface seepage is still active giving an added sparkle to the crystal faces. Rimstone pools on the floor are full of water and care must be exercised in their traverse.

Glow-worms are present in the last section of the cave. Hanging from the ceiling and walls, their reflections in a clear chest-deep pool present quite a challenge to the photographer.

Past the pool the ceiling lowers to a crawl over a floor of rounded creek-stones. Progress is halted as the passage gradually decreases to a height of three or four inches.

Apart from the entrance crawl and the area past the pool most of the cave is a long walk-through passage which is well worth a return visit for photographic purposes alone.

Ranelagh

Claiming the first Society trip for 1968, five members journeyed to Ranelagh (near Huonville) on New Years morning.

This expedition followed a report received by the Society about a cave situated on the side of a hill with a spring rising below in a nearby valley. Expectations were tempered by the fact that the presence of cave-bearing deposits of limestone in this area was unknown to the Society.

However, investigation substantiated the report despite the fact that the rock appeared to be sandstone. The cave itself resembled drainage sinks found in limestone areas.

A vertical drop of about eight feet to a steep slope of about thirty feet in length opened into a narrow chamber with tree roots growing through cracks in the ceiling. Two cave-spider egg-sacs and signs of water erosion of the lower walls were present in this chamber. A fissure at right angles to the chamber contained a shaft of about forty feet to the visible floor below.

A ladder was rigged but the descent was cancelled at the half-way mark because of falling rook and dangerous conditions generally. A further attempt from another section of the fissure was forestalled when a chock-stone shelf gave way.

At this stage further exploration was suspended and the party retreated to the surface.

From the structure and lay-out it was surmised that the forming of the cavern was due to displacement along joint, fault and bedding planes with the clay and gravel deposits and water action as a secondary feature.

P.S. An on the spot quotation:-

"What a place to spend the morning after New Year's Eve".

THE ADVENTURE CAMP 1968.

The National Fitness Council of Tasmania conducted their Adventure Camp at Dover during January 1968. Catering for boys between the ages of 15 and 17 years the Camp aimed to introduce the challenges of outdoor life and activities, particularly Bushwalking, Canoeing and Caving.

The Southern Caving Society was co-opted for instruction and supervision of the caving activities.

Preliminary preparations and discussions by the Society began in November 1967. Because of the original exploration and cave surveying being done by the Tasmanian Caverneering Club in the Ida Bay Area it was decided to confine Adventure Camp caving activities to the Hastings Area. The Field Organiser of the National Fitness Council Mr. Iain Barnes was introduced to the area by inspecting King George V and Newdegate Caves where he met that affectionate substance known as Binney Tunnel mud.

The Camp proper ran for 15 days between the 13th and 27th January when 20 boys and 9 instructors took residence at the camp-site. Situated 5 miles from Dover on the Southern bank of the River Esperance Estuary, the 40 acre, water-fronted, bushland site is well appointed. Permanent facilities include two bunk-houses, a lecture/recreation hall, store room, and shower/toilet blocks.

The programme was divided into two weeks, the first for instruction of basic skills and techniques with short excursions and the second week on longer expeditions in specific activities.

During the instruction programme lectures were given on safety and hygiene, bushcraft, map and compass reading and first-aid. Knots were demonstrated and explained and the techniques of canoeing, belaying, abseiling and flexible ladder climbing were practiced. Cross-country running, mountain expeditions to Adamson's Peak and overnight solo-bivouacs were part of the "toughening-up" programme.

The daily routine began at 6.30 a.m. with cross-country running to and from a swim and concluded at 10.30 p.m. after evening lectures and supper. Two training sessions were conducted each day, morning and afternoon, for which the boys were split into four groups. A staggered instruction programme with the small groups enabled closer liaison between instructor and pupils.

A practice surface "search and rescue" day illustrated the need for close observation of safety precautions and the application of commonsense in the bush. As usual the "lost and injured" victim did not feel quite so healthy after being rescued.

Adventure Camp (Cont.)

Caving instruction began with lectures on the use and care of ropes and ladders. Only basic knots were emphasised, these being the bowline, figure-of-eight, clove-hitch, round-turn and two half-hitches, the reef knot and the sheet-bend finished with half-hitches and thumb knots.

Each knot was taught separately and the applications and working principles were explained and demonstrated.

A free hanging thirty foot flexible caving ladder was rigged from a tree branch with a safety-line belayed through a pulley above the ladder and another anchored at ground-level. This allowed the normal belaying position to be simulated with the force of a fall being transferred to a downwards direction. After correct climbing and belaying techniques were demonstrated and practiced, each boy took turn at belaying and being belayed.

Under close supervision and correctly attached to the safety line, jumping from the ladder a few feet from the ground enabled all to experience the rope forces exerted in a fall on both belayer and belayed. This resulted in closer adherence to correct techniques.

During the evening of Tuesday 16th the British film "Cave Rescue" was screened and discussed and a selection of Society caving slides were shown. This was followed by a lengthy discussion of caving generally, and the peculiar problems associated with the sport. Emphasis was given to personal equipment and the problem of exposure in Tasmanian caves. The hand-torches brought to the Camp by the boys were inspected and arrangements for spare globes and batteries were made.

The first underground activities began at 9 a.m. on Saturday 20th January at Hastings. While the Adventure Camp party made an inspection of the Tourist section of Newdegate Cave, a Society party placed a boot-scraper at the beginning of the caving route and then rigged safety-lines on the slopes of the Binney Tunnel and pitched the ladder climb into Mystery Chamber. After a speleo description and history of the Tourist section was given by Cave Guide Mr. Roy Skinner, the Adventure Camp party returned to the surface.

Because of the large number of people involved the Adventure Camp members were divided into three parties and twelve S.C.S. members integrated among the groups to give a ratio of at least one experienced caver to every two Adventure Camp members with two S.C.S. Party Leaders in each group.

The first group donned their caving gear and set off to the Binney Tunnel at 10.30 a.m. while Groups 2 and 3 returned to the Thermal Pool and surrounds to relax and have lunch.

Adventure Camp (Cont.)

Reaching Mystery Chamber, the underground party was allotted an hour for pseudo-exploration towards Hell's Half Acre. Group 1 then returned to the surface to hand their equipment to Group 2 which entered the cave at 1.45 p.m. Duplicating Group 1 excursion they returned to the surface at approximately 5.15 p.m. to meet Group 3. Underground activities were completed at 10.30 p.m. when this final group arrived back at the surface after their excursion and detackling the route.

Summarising the day - 34 people had been through the Binney Tunnel, 22 of them for their first trip; crawling distance for the whole day amounted to over 74 lengths of the Tunnel and two senior S.C.S. members spent over 13 hours underground, crawling back and forth to oversee the whole operation. Unfortunately, in spite of the strong draught, one major problem eventuated in the form of fogging in the higher parts of the system.

Sunday 21st was a much needed day of rest. After a very busy week of activities the boys washed their clothes, repaired battered boots and relaxed for the remainder of the day. Organised activity was confined to the Camp Officers and Instructors who were busy making final plans and arrangements for the second part of the programme in which the boys were able to opt for the specialised expedition of their choice. Due to the limited number of available canoes and the nature of the caving expedition the activities of Caving and Canoeing were offered as a combined feature.

Rations were drawn, gear was packed and Monday morning saw the Mountain Expedition team into the scrub on their way to Pindar's Peak, the Canoeists launch themselves on the upper reaches of the Huon River and the Cavers into the scrub at Hastings.

Visiting King George V Cave the caving party spent most of the day stretching limb, body, muscle and mind into the further most recesses of the system. On the way to the entrance one of the misguided instructors missed the track and stumbled across the efflux of the cave stream. The Adventure Camp boys were treated to the sight of a pair of booted, apparently bodiless legs waving in the air while this feature was inspected.

Returning to Hastings camp-site for a meal of mushroom soup and other savoury delights the party then explored Christmas Cave and its extensions before expiring for the night after a lengthy session of jokes and tall stories.

The Caving Instructors were revenged next day when, after visiting Beattie Cave, the boys were given a taste of scrub-bashing in the "Man-eating" Hastings rain forest.

Wednesday was the change-over day when Cavers left to become Canoeists and the Canoeists arrived to be made into Cavers.

Adventure Camp (Cont.)

On Thursday in King George V Cave scratches and bruises were added to the blisters from the canoes. During the evening excursion to Christmas Cave novices became experts in cavers' "humour" as Cave Guide Michael Pear joined the party and was shown through the muddiest sections. Slimly built Assistant Instructor Bob Winnall made his mark when, after being forewarned of the tightness of Wee Three Crack, he "walked" through to ask the where abouts of the squeeze.

All members of the Adventure Camp returned to Dover on Friday afternoon. After the Expedition's debriefing session that evening, the Caving Instructors and their assistants retired to underground Mole Creek for the weekend to rest and recuperate.

The National Fitness Council broke camp next morning, Saturday 27th January, and the Instructors and boys, weary but happy and wiser, returned to their homes in the various parts of the State.

Summary and Conclusions.

All boys interviewed expressed satisfaction and gratitude for what had been gained and achieved during the Camp. The fee of $35 covered transport to, from and during the Camp, food, accommodation and the use of the specialised equipment supplied for the expeditions such as ruck sacks, tents, sleeping bags and ground sheets, overalls, ropes, ladders, lights and helmets and the canoes. Basically all the boys had to supply were themselves and their clothes.

A strong feeling of self reliance, teamwork and friendship had been developed. All were able to participate in activities for which the opportunities may not have otherwise been readily available.

A rigid code of safety precautions was observed and the only mishap which occurred was unforeseeable and concerned an Instructor's artificial knee-cap.

The Adventure Camp had fulfilled its aims and the Society gained valuable information in the matter of handling and catering for large numbers of relatively inexperienced persons.

The National Fitness Council of Tasmania provides great service to the community generally, and the Southern Caving Society is proud to have been given the opportunity to assist in this venture.

Acknowledgements.

The Society wishes to acknowledge the co-operation and assistance rendered by the Tasmanian Tourist Bureau and the Cave Guides at Hastings, and the assistance of Adventure Camp Assistant Instructor Mr. Bob Winnall.

PERSONAL CAVING EQUIPMENT FOR TASMANIAN CONDITIONS.

Conditions in natural caverns are generally fairly hostile. As Tasmanian caves are generally wet and cold the problem of exposure due to body heat loss must be considered when choosing equipment. This article is intended as a guide only, as individual circumstances and personal preferences must be taken into account, but the following conditions should be fulfilled:-

CLOTHING: Should afford maximum insulation, warmth and protection with minimum weight and bulk but must allow body to "breathe"· Freedom of movement is essential and all articles should be washable.

SAFETY HELMET: Head protection is essential and a tested brand of construction helmet must be worn.

LIGHTS: Due to the absolute darkness of underground caves a caver is dependent on his own light sources. Reliability and robust construction is essential and weight and bulk should be confined to a minimum. Ample spare parts and replacements must be carried at all times.

Recommendations.

CLOTHING: Two pairs of long, thick socks usually worn at once. Football socks give some shin protection. Greasy-wool or "Miners" socks do not compact underfoot when wet.

Underwear: personal preference of type but should be warm. Navy-blue colour does not show mud or clay stains.

Shirt: preferably woollen, should have a long tail and long sleeves.

Jumper: thick, warm, closely-knit and long e.g. football guernsey.

Trousers: thick, hard wearing and tear-resistant material. Jeans are not particularly suitable - usually too tight. Zippers jam and get clogged with mud.

Combination Overalls: Should be large enough to allow unrestricted movements while wearing a complete set of clothing underneath but not so loose as to snag excessively. Overalls unserviceable due to excess tears in the seat and legs may be converted into a handy piece of gear by cutting off the legs. Worn over shirt and jumper with the long "skirt" tucked into heavy denim, drill cotton or corduroy trousers this makes an effective caving suit.

Parka: or waterproof coat for bush-walking and campsite.

FOOTWEAR:

Boots: Hard wearing rubber soles with no accessory or special nails because hob-nails, clinkers and tricounis scratch formation sections and are also dangerous where ropes are being used. Lacing should be through eyelets rather than clips because clips catch in the cable of ladders. Comfort and ankle support are the criteria and to this end high sides boot such as RIGGERS boots are excellent. Again, weight should be taken into consideration.

Sole tread patterns should be simple to aid clearing of mud. Short sided boots may be coupled with gaiters.

Heavy shoes or desert boots for car travel and campsite.

HELMET:

Construction safety helmet of fibre glass or plastic with narrow brim and adjustable liner. Should be as light as possible, preferably with bracket attached for head-light.

Two elastic chin straps useful - one for chin and the other for behind the head. Recommended brands are "Gold Cross" and "Protector" but any brand of helmet used must comply with industrial safety standards.

Bear in mind that a chipped, fractured or punctured helmet can be replaced but skulls in similar condition are another matter.

LIGHTS:

The Society requires each member of an underground party to carry three separate sources of light. A box of matches does not qualify for inclusion in these three but should be carried at all times.

Class 1. Electric : Circuits and construction should be as simple and robust as possible.

Type (a) Headlamp: Attached to helmet by a bracket or band with a lead to battery case, a headlamp leaves both hands free for climbing.
The lead should be long enough to allow the battery case to be worn on a belt, in the hip pocket or moved to a breast pocket. Power supply may be from dry cells or rechargeable accumulators. The rechargeable units used by miners are very reliable if property maintained but are heavy and expensive. The main problem with accumulators is leakage and spillage which is obviously dangerous where ropes and wire cables are concerned. Sealed units are available such as the nickel-iron and nickel-cadmium cells. Dry cells supplies using multicell arrangements are susceptible to poor contact between cells. Commercial brands are “Goodluck” and “Winchester”.

LIGHTS: (Cont.)

With a little ingenuity and practical ability a satisfactory unit may be constructed in the home workshop. Switches should be incorporated in the light unit rather than on the battery case itself.

Type (b) Bicycle Lamp: Uses double cell flat type battery. Can be carried in the hand, clipped to the helmet or worn on a lanyard around the neck.

Type (c) Hand Torches: Rubber case, waterproof using two or three dry cells. A weak point of several brands is the attachment of the carrying ring, but this may be modified by soldering or bolts. Carrying rings are seldom solid and should be joined by welding or binding with copper wire and soldering.

Spare globes for electrical units should be carried at all times, paying attention to the globe socket i.e. whether the required globe has a "push in" or screw type base.

Class 11 Carbide: Naked flame of burning acetylene produced by dripping water onto carbide. Height of flame is controlled by varying the drip rate of water. Generator units consist of a water tank with regulating valve clamped or screwed to the carbide-containing base chamber. The gas produced is lead to a burner jet either through the side of the base chamber or via a pipe through the water chamber. These connections should be inspected regularly to clear any spent carbide dust. The gasket between the two chambers and the burner jets need to be kept in good condition. Jet prickers should be carried at all times as well as matches. Refills of water and carbide should be carried if light is required for extended periods. Two systems arc available:-

(a) Hand-held combination generator, burner and reflector. The smaller units may be clipped to the helmet.

(b) Generator worn on belt with flexible tube to helmet-mounted burner and reflector. The tubing should be thick-walled or reinforced with coil spring curtain wire to prevent constriction of the tubing.

Commercial brands of carbide lamp are "Premier" - available in three sizes, "Ericson", "Butterfly" and "Pinnacle".

LIGHTS:(cont.)

Properly adjusted and cared for these units will supply light for approximately 14 hours in the large models and 4 - 5 hours for the small units.

The trick with carbide lamps is to use the absolute minimal water setting and to shake or tap the base occasionally to disturb the carbide. As the carbide is used a coating of powder is produced on the surface of the lumps. This is removed by the agitation. Too much water produces a paste which clogs and reduces efficiency.

Class 111 Candles, Solid Alcohol, Magnesium Ribbon:

Candles provide emergency lighting and are also useful at belay points, ladder pitches and other situations where positions are maintained for extended periods.

Solid alcohol provides a source of heat as well as some light.

Magnesium ribbon has special uses such as photography and lighting extensive caverns but produces dense smoke, is dangerous and usually difficult to ignite.

MATCHES: Waterproof matches should be carried at all times, preferably removed from the box and placed in a small plastic container.

A film container is an alternative. Several strips of the striking surface should be included. “Green Lights” are a commercial brand but ordinary matches may be waterproofed by pouring molten paraffin wax into the box and over the matches. When set this gives a block from which the matches may be split as required.

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MOST IMPORTANT - SEE OVER.

SPENT CARBIDE, BATTERIES AND CANDLE STUBS.

All spent batteries and carbide, candle stubs and food scraps must be carried from the cave and buried. This is part of world-wide caving codes and ethics. Apart from presenting an eyesore, rubbish dumped under ground has more serious effects. Spent carbide, batteries etc. can leach into the rock and cause irremovable staining of formation. Cave fauna has developed on a very delicately balanced cycle in its unique environment and circumstances.

Rubbish and excreta are very toxic to cave communities. Plastic bags make satisfactory containers for removal of discarded or spent material and the small effort required for removal is negligible when it is considered that the preservation of thousands of years of development both biological and geological depend on the observation of this simple rule.

A most appropriate saying which has developed over the years says:-

"Take from caves nothing but photographs, experience and memories, leave nothing but footsteps and be careful where your leave those".