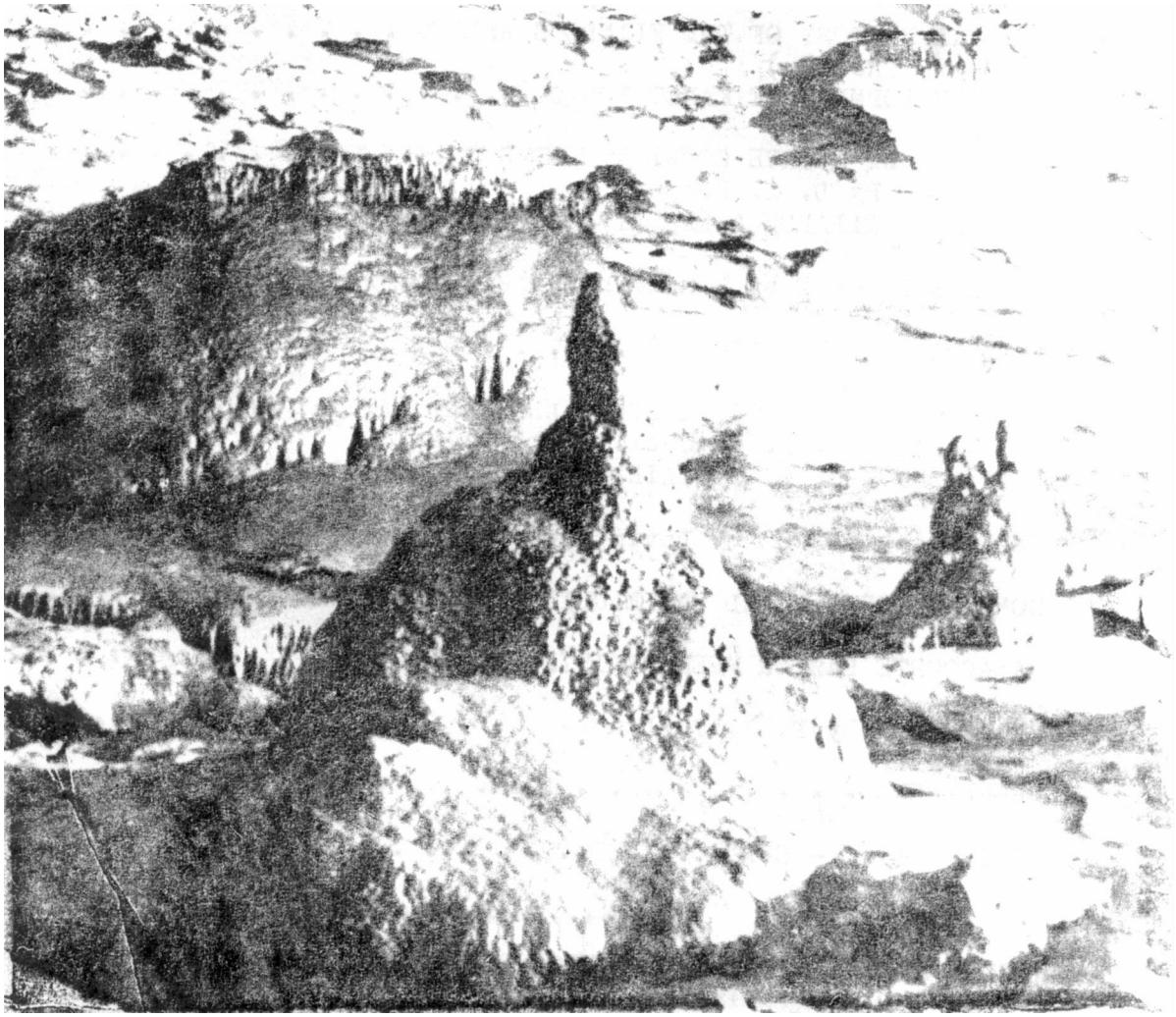
NEWSLETTER

Cave Exploration Group

South Australia

C/O SOUTH AUSTRALIAN MUSEUM NORTH TERRACE ADELAIDE

May - July 1971



Cover Photograph: Smoke Cave, Naracoorte. Courtesy of P.A. Chappell.

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NOTICE OF MOTION FOR ALTERATION OF CONSTITUTION:

In accordance with section 11(b) of the C.E.G.S.A. Constitution, notice is given of a motion to alter this Constitution at the General Meeting on the 26th May at 8.00pm in the Museum Lecture Room. The motion is:

That section 1 of the Rules be altered to –

Associate Membership..... $3.00 per year
Country Membership..... $3.00 per year
Full Membership..... $5.00 per year

From the standing fees of $2.00, $2.00 and $3.00 respectively.

The motion was proposed by M. Batman and seconded by T. Maddock.

EDITORIAL

This is the first newsletter to come out since the Annual General Meeting and. this first editorial has a slightly different slant to it. C.E.G.S.A., over the years, has developed. "What kind of statement is that?" you might ask. Think about it for a minute. Take the time to consult your latest annual report. What do you see?

Membership has increased, and increased considerably! Contacts between the Group and other organizations has strengthened considerably. But this is no time to sit back. We're not half the way there yet. We can go as far as we like.

As you have certainly seen by now, the newsletter has been completely reorganized. This attempted improvement is aimed at giving the reader at little more and also aimed at appealing to a larger cross-section of group members. Apart from the obvious additions such as the front-cover photograph and the list of contents there are several other additions which have not previously been included. On page 4 there are recent abstracts from speleo-literature. Reviews on some new books have been included as well as feature articles.

What I, the editor, want you to do is comment on this newsletter and feel free to criticize any part of it. I want you to suggest anything you feel could be included. This newsletter is the only practical way of communicating with all the members of the Group, where-ever they be scattered as well as letting the other societies know what is happening within C.E.G.S.A. I want to make this newsletter the best one produced by a caving society in Australia. This cannot be achieved without your help - you, the readers of this quarterly paper.

T.H.M.

AVAILABLE FROM UQSS!

The most recent addition to Australian speleo' literature, "Mount Etna Caves" is now available from the University of Queensland Speleological Society. The cost of this book is $2-75 and it is well worth every cent of that money. If you are interested in knowing more about this book a review has been included in this issue of the newsletter. It is on page 5 - - -

ABSTRACTS

THE BAT POPULATION OF THE NARACOORTE CAVES AREA. By Elery Hamilton-Smith., Hon. Associate in Zoology, South Australian Museum. To be published in the Proceedings of the Eighth Biennial Conference of the Australian Speleological Federation, 1971.

It is indicated that it is possible to distinguish a number of relatively discrete populations of the bent-winged bat, Miniopterus schreibersii in Australia. Each population generally moves about in the course of each year within a specific territorial range. These ranges may overlap.

Territory and movements of the "Naracoorte" population and results of studies of these aspects are discussed. The annual cycle of the "Naracoorte" population is compared and contrasted to other Australian populations. Some notes on associated organisms are included. The biological status of the "Naracoorte" population is summarized. An appendix, two figures and four tables are included. - T.H.M.

FOSSIL RESEARCH AT NARACOORTE (VICTORIA CAVE). By R. T. Wells, Dept. of Zoology, Adelaide University. To be published in the Proceedings of the Eighth Biennial Conference of the Australian Speleological Federation. 1971.

The fossil site in Victoria Cave is described and some techniques used in excavation are mentioned. The identifications are listed in terms of the currently accepted classification of marsupials as proposed by Dr. David Ride. Several possible theories for the formation of the site are included. - T.H.M.

PRELIMINARY REPORT ON CAVE S203, NARACOORTE, SOUTH AUSTRALIA, by T. H. Maddock. Yet to be presented.

During the preliminary investigation of Cave S203 a deposit of mammalian remains was discovered in the sediments of the floor of the far chamber. Mandibular fragments of two species of the extinct Macropodid genus Sthenurus (Owen) were recognized. A surface collection was made at random points across the chamber and an accurate survey was produced. Stratigraphic observations were attempted.

S203 specimens will be lodged with the South Australian Museum. All aspects of this investigation were carried out by members of the Cave Exploration Group (South Australia). - T.H.M.

REVIEWS

MOUNT ETNA CAVES. J. K. Sprent, editor. University of Queensland Speleological Society, 1970.

This is a well planned and laid out collection of papers covering several aspects of the Mt. Etna and limestone Ridge caves area of Central Queensland. It has integration and lacks the patchiness that some of the earlier Australian caving publications had.

The material is presented in three parts. Part 1 covers geological and general aspects; Part II covers biological aspects; Part III deals with the history and conservation of the area. This book contains papers by such well-known names to the caving world as Dr. P. D. Dwyer, Elery Hamilton-Smith and Dr. D. Hill to name merely a few. It must be recommended as reading to any interested in caving or merely natural history without any specific interest in the Mt. Etna area - an excellent publication from the Queensland speleo's! T.H.M.

NATURAL HISTORY OF THE FLINDERS RANGES, D. W.P. Corbett, editor Libraries Board of South Australia, 1969.

This book contains sections covering the geology, geomorphology botany, entomology and mammalogy of the Flinders Ranges. It is written in a simple style designed -specifically for the general public but still retains the scientific facts. For those interested in the Flinders Ranges it should hold special interest as it deals intimately with this most fascinating area.

The geological section discusses the formation of the Ranges describing the Adelaide Geosyncline, any volcanism and intrusions of basement metamorphic rocks and some occurrences of Pre-Cambrian fossils. All terms are explained for the rank amateur -as they are with each section.

This section is immediately followed by the geomorphology of the area which describes its many interesting and unusual forms. The weather and the weathering processes are discussed in detail and there is mention of limestone outcrops and their nature throughout the Range.

The remaining three sections give a complete account of the flora and fauna of the area. The mammal section is written by Mr. Peter Aitken, a past member of the Cave Exploration Group and the Curator of Mammals at the South Australian Museum.

With conservation brought so much before the public in this day it is books such as this one which educate the people in matters of our natural history, create interest and give it every support. - T.H.M.

THE DEVELOPMENT OF KARST FORMS.

What is "Karst"? Karst is a general term applied to limestone areas which possess an assemblage of landforms resulting from the sub-surface diversion of drainage and underground solution of the country rock (Twidale, 1968).

Probably the largest and, undoubtedly, the most famous of Australia's limestone outcrops is on the Nullarbor plain. South Australia has other large areas such as the lower Murray valley and the lower Southeast where a pure and cohesive limestone occurs. These areas are well represented in the development of karst forms.

What exactly is the development of karst? Four conditions are depended upon for the development of karst forms and, although it can develop under one or more of these conditions, it is best represented where all four apply.

The first condition for karst development is the presence of a soluble rock such as limestone, dolomite and chalk near to the surface. Limestone, in itself, is not soluble in water but reacts strongly with weak acids to form bicarbonate, which is soluble in water.

To facilitate the first condition groundwater should be able to pass downward, through the rock, accomplish its solution work and then emerge. Along the Glenelg River this could have been made possible by deeply entrenched surface streams. At Naracoorte it could have been accomplished by a water flow through the dune as it developed into a stranded beach dune many years ago (Hill, lecture to C.E.G.S.A., 1970).

With this water flow the soluble rock must be highly jointed and also dense. The rock itself should be strong and compact so that the water flow is able to pass through the joints while the rock itself remains impenetrable.

To ensure these conditions prevail and are able to constantly act a moderate to heavy rainfall is necessary. Failing this water must be available from some other source such as artesian water or development will be retarded. A reasonable rainfall also ensures that there is a vegetation cover sufficient to supply, on decomposition, the humid acids necessary for the solution of limestone.

These are the conditions necessary for karst development. Take a good look at the area next time you go caving and see what conditions you can find. Try to get to know the development of our caving areas. Reading on this subject is available from the group library. T.H.M.

A REPORT ON A CAVE COMPLEX, USED BY NATIVES, AT THE 95 MILE PEG, IN THE NORTHERN TERRITORY - SITE DISCOVERED EARLY 1969. By D. A. Hearne.*

The site consists of a group of caves (four in all) which appear to have been used by natives. One of these caves contains a drawing, and a possible object of some veneration. Cave No. 1 appears to have been used occasionally as a living area (N. B. lack of surface implements, and abundance of smoke staining), while cave No. 2 (the 'main cave') appears to be an area of weapon manufacture and possibly of some ritual significance.

From the evidence found, a passageway may exist between caves No. 1 and. No. 2, and this passageway may well contain another cave.

A knife sheath and. snake skin ring found, in cave No. 2 provide further evidence to the supposition that this cave had some ritual use.

A cave painting - an exaggerated tortoise or lizard? Or is it a fanciful attempt at showing a bat in flight? Whatever it is, it is a style not previously encountered by the author in the Northern Territory.

Finally, the 'gaping wound'. Such a striking feature, I am sure, must form part of local myths. Directly under a flow of iron oxide (possibly painted on the rock wall under a 4" hole to give the impression of a wound bleeding freely) is a natural shallow stone basin, which contained two marble-sized and shaped quartzite pebbles.

From the lack of edible food plants in the area and the distance from water, the author concluded that the cave system was not a general living area for the tribe.

*Forest Research Institute, Darwin, N.T.

This article was abstracted from a complete paper published in the Journal of the Anthropological Society of South Australia, Vol. 8, No. 8. October 1970. - T.H.M.

THE LAKE CALLABONNA EXPEDITION, 1970.

by N. S. Pledge, Curator of Fossils,
South Australian Museum.

Vertebrate fossils were first found at Lake Callabonna in 1892, and in 1893. The South Australian Museum mounted full scale collecting expedition that worked in the field continuously between January and November of that year, under the worst conditions imaginable.

Since that time the fossil site has been visited only on two occasions - once just after WW II, by Mr. Fletcher, Paleontologist at the Australian Museum, Sydney; and again in 1953, this time by the joint S.A.M. -University of California expedition under Prof. R. A. Stirton.

That last party included graduate student, Richard H. Tedford. Tedford's interest was aroused by some less spectacular remains (giant kangaroos) that had been collected in 1893, and as a part of a wide ranging exploration program, he wanted to return to Lake Callabonna to learn more of the Diprotodon's contemporary neighbours.

Early in July 1970 a joint expedition consisting of Tedford and Bob Emery (American Museum of Natural History), Clayton Ray and Frank Pearce (Smithsonian Institute) and Paul Lawson and myself (South Australian Museum), left Adelaide with three four-wheel-drive vehicles, a caravan, and a hired Mini-Moke, on a two-day trip to the Lake. We used the Moke as a reconnaissance vehicle, first to find a good camp-site, then to find a way across the lakebed to the fossil sites. It proved its worth, as several times it became stuck in the clay and had to he lifted out bodily.

For the first three weeks we excavated near the site of the 1893 camp. (They had not so much trouble getting about, since they used camels for most purposes). This was some six miles from our camp, and took us over half an hour to reach. Using the method devised by the first expedition - probing with a steel rod - we located three skeletons within half an hour, and we spent the next three weeks excavating them. They were 2-3 feet down, in very sticky wet clay, and the lowest bones were in water - brine soaking through from a nearby springs. Excavation was slow and tedious - taking out bones separately, and hoping the preservative would counteract their tendency to crumble to powder on drying.

While the rest of us slaved under the burning sun and chill wind (it was mid-winter), Tedford started to examine the local geology. He discovered to everyone's surprise that the low islands were not simply sand dunes built on the lake floor, but were actually remnants of old lake sediments, the rest of which had been blown away over a period of thousands of years. More surprising was the discovery on one of the islands of a bird rookery with remains of eggs, skeletons of both young and adult birds, and fish bones indicating fish possibly a foot long. We collected the bird skeletons, some of which may be cormorants.

Our reconnaissance had shown that another area would yield a larger variety of vertebrate fossils with less effort, so we finished our operations at the first site and moved to the new one. Here, scattered on the 'sandy' surface of the clay were numerous bones of kangaroos, emus and Diprotodons. Indeed, you could not walk more than 20 feet without finding some evidence of ancient life of that now-godforsaken area.

We now worked separately, each on a particular fossil we had chosen, because one could determine, from the surface remains, the species and general completeness of the fossil. Soon we had accumulated a notable collection of extinct

animal fossils - giant wallabies, (Protemnodon), giant kangaroos (Macropus and Sthenurus), giant wombats (Phascolonus), emus (Dromaius) and giant emus (Gentornis) as well as Diprotodon.

In some instances the bones were more or less articulated making excavation fairly easy since you could predict where the bones would be. In other cases, however, the bones were very mixed up and sometimes broken, as though some lumbering Diprotodon had stomped a half-buried skeleton down into the mud. We could, in fact, see some evidence .of their foot prints, but this did not prepare us, for the discovery, several miles away, of a series of trackways that can only be attributed to Diprotodon. Their mode of preservation, however, is peculiar and only a few actually showed the outline of the foot, but they the right size and shape.

What did Lake Callabonna look like in, the time of Diprotodon? We cannot say definitely yet, but the discovery of wood fragments, Callitris pine cones, and various seeds buried deep in the blue clay indicate that it was fairly wooded, probably swampy, at least in the vicinity of the springs which provided permanent water. Such springs can be found in the northern part of the lake. We can only surmise why there are so many skeletons to be found there. Possibly, during a long drought, the starvation-weakened animals congregated around this last water supply but, when they became bogged in the sticky clay they were too weak to extricate themselves, and died where they stuck. We can see this in the Diprotodon skeletons:- most are caught belly-down, with the legs flexed and folded under the body, and head stretched out ahead. In a few cases the animals seem to have become stuck, then fallen over sideways.

By the end of three months our expedition had accumulated about five tons of fossils, including their casts and packing which were shipped back to Adelaide and then to the U.S. where they will be prepared. In view of their state of preservation, preparation of the bones will be a long-and-costly job, one for which the South Australian Museum is, unfortunately, not equipped (at this stage). However, we will receive a portion of the finds, including the type specimens of any new finds to science.

A word to anyone contemplating some souvenir hunting. DON'T! Firstly, the lake bed is treacherous. The wind quickly destroyed our tracks so that they cannot be followed, and trying to cross many areas would soon have any vehicle well and truly stuck. Secondly, the lake is a fossil reserve - the first proclaimed in Australia - and it is an offence for any unauthorized collecting. No help will be received from the local station owner who recognizes its importance. Thirdly, excavation is a highly skilled business. The bones are so fragile that expert knowledge and much experience are needed, using the right equipment, to extract bones in good enough condition to study. Unskilled attempts would destroy much material that could be scientifically valuable.

The Lake Callabonna Expedition, 1970, was presented to the Cave Exploration Group (South Australia) as a lecture on Wednesday, 24th March.

CONSERVATION

WE HAVE TO CAVE. By Benjamin Nurse*

One of the problems which confronts our Society is that we have to cave and in so doing irreparably damage in slight degree the cave entered. The Society is fully aware of this and has attempted to minimize the damage by virtue of its membership qualifications and policies. Few other Societies can claim this.

The particular membership qualifications and policies involved are as follows.

(a) Test trips by Prospective members on which the trip leader educate them on conservation matters. Wilful disregard of conservation regulations stage can result in exclusion from the Society. This latter action has been invoked twice.

(b) Trips are organized with definite objectives in mind, example being-surveying (both surface and underground), photography, stream tracing, entomology, radio communication, cave detection, cave numbering, meteorology, and planned exploration and excavation work.

(c) Prospective members must complete a project before attaining full membership. This obliges them to take an early interest in constructive speleological work; an interest which otherwise might be slow in developing.

(d) Data is recorded on all caving activities, in the form of trip reports and cave surveys etc. By referring to these records, future trips can avoid duplication of past work and consequently minimize random caving.

*President of the Sydney Speleological Society.

(Reprinted from the Journal of the Sydney Speleological Society Year Book 1969 - 1970.)

EDITOR'S NOTE:

I have reprinted this article in the newsletter because the problem in discussion applies here in South Australia also. The Group is growing and an interest in caving in South Australia is growing. We have to move now to protect the State's caves. Anyone who has visited Brown-Snake Cave at Naracoorte or Mairs Cave in the Flinders Ranges will know what blatant vandalism (that's all it is) can do to a once beautiful cave. We should think carefully about the list of qualifications outlined above. Do you think any of those are un-reasonable?

T.H.M.

TRIP REPORT (NARACOORTE)

Since Christmas three new cave reports have been investigated. Two of these were actually cave systems, the third was an impenetrable collapse, and, to date, Possum Cave (one of the three) has been mapped.

The first report eventuated as a sand-filled collapse in a small rise about two miles from Hynam, on a property called 'Eldarbo'. It is possible that, with a little time spent on excavation, access could be gained to some form of system.

The second report from Mrs. Schultz in Naracoorte proved a little more promising. The cave is a single chamber about thirty or forty foot in length with a sloping floor running from the entrance to a small lake against the back wall. The cave is devoid-of formation but there are some large calcite flakes floating on the water. Mrs. Schultz reports that water used to flow through the cave in the past.

The third report led us to a paddock about one and a half miles north of North Cave, supposedly the furthest north of any cave on the Naracoorte dune. Two holes were found in a paddock about one hundred feet apart, both of which led into some sort of cave formation.

The first hole dropped about fifteen feet to a talus slope running down into a chamber about thirty feet in width and about eight foot high. The overall length of the chamber is one hundred feet with the far end, leading towards the other hole and becoming very restricted.

The other hole drops into a low chamber about thirty feet long the far end of which falls steeply away into another smaller chamber. Because both caves are so close together and-running in similar directions it is possible to suppose that they are of the same system. For this reason they have been named and numbered as the same cave, Possum Cave No. 1 & 2 — S2l8. There are carcasses of several animals in the caves including an echidna and a female possum with new newly born young.

P. A. Chappell.

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BAT CAVE NARACOORTE, A STUDY AREA AND NATURAL CAVE LABORATORY.

By now everyone within the Group has heard of the restriction placed on Bat Cave at Naracoorte, some may be asking - 'Why'? Everyone realizes that there are bats within the cave but does everyone realize the significance of that particular cave. There are bats in many other caves of the area of the South-East in general, so what makes Bat Cave so very special? Perhaps this will tell you -

First you should know a little about this particular species of bats. All bats belong to the order Chiroptera (Greek for hand-wing) and this order contains the second largest number of species among mammals.

First are the rodents, to whom bats bear only a remote taxonomical resemblance. Bats are descended from an early extinct species of Insectivora but because of their dexterous hands and feet they were grouped with the Primates by early taxonomists.

There are bats that feed exclusively on fruit and bats that lap nectar from flowers. One species of bat from Central and South America catches fish in its claws, but most bats, however, feed on insects.

In Australia there are several species of cave-dwelling insectivorous bats, the largest by far of which is a species called Miniopterus schreibersii. This species is found as far north as Broome in the far North-West and is found right along the extent of the Eastern coast to South-Eastern South Australia; some sub-fossil evidence has been found as far west as the Flinders Ranges. To date there are no records of Miniopterus from Western Australia other than Broome of course. It is not found in the inland areas but only in the humid or sub-humid climatic areas which exist along the eastern coast-line.

These bats breed once a year and, although they are distributed through many caves in all areas, they migrate to one particular cave for the maternity season. How these caves are picked and why they are repeatedly used is not completely known but all maternity caves in Australia have large chambers with favourable climatic conditions allowing a humidity and temperature build-up. There are several of these caves distributed along the Eastern coast-line and bats from particular areas return every year to their particular maternity site to breed. There is no great interrelationship and movement between bats belonging to different maternity caves, or specific physiographic areas as it has been related.

Bat Cave at Naracoorte is one of these breeding caves. Bats fly from as far away as two hundred and fifty miles to Naracoorte every year for the breeding season and leave again afterwards for one or another of the caves in the area. Their movements within the colony are not completely understood as yet either and no particular patterns have been traced. Bats in South Australia have been recorded flying distances of more than fifty miles in the space of a night. It can easily be seen that much more banding must be undertaken before any further knowledge of bat movement can be gained.

Bat Cave has several unique characteristics in which it is peculiar and stands alone from the other breeding caves. Firstly, Bat Cave has the largest maternity population of all the sites being estimated at various times between one hundred and two hundred thousand bats. Secondly, and more important, both males and females migrate to this site while the other sites are inhabited exclusively by females. Other striking difference has been the breeding time; while in other maternity caves this is almost always early to mid-December it has been recorded at Naracoorte as early as early October. Also, a variation in the breeding time has been recorded from year to year, a fluctuation of sometimes as much as two months and the reason is not known. In fact, these differences are not well understood and they are of great enough significance to be of major

importance to the study of bats in Australia. Miniopterus is a genus of tropical ancestry and possibly some of the differences in the Naracoorte population could be due to migration into Australia at a different time, perhaps earlier, than the East-coast populations.

In the hope of illuminating at little more about this most unusual population and also just learning a little more about this species in general, certain equipment has been installed within Bat Cave. Part of this equipment consists of remote temperature-reading devices which are monitored in a hut on the surface. In this way temperatures can be taken within the cave without causing any disturbance to the population. Also, these devices are of such accuracy that the most minor of fluctuations in temperature can be recorded. Any considerable movement of bats within the cave could cause this fluctuation and be monitored on the surface, and in this way movements within the cave can be observed where-as, entering the cave will cause a disturbance apart from the natural cycle of movements and perhaps even disrupt this cycle.

It can be seen from this that any unauthorized entry to Bat Cave can give a false reading on the surface and so destroy the entire experiment. Also, apart from this, Bat Cave supplies a perfect study area to observe these bats in their natural environment and perhaps deduct a little about their social organization or just their ecology in general - that is, if the colony is not continually disturbed.

Why is the study of these bats important anyway? Bats, as mentioned before, are in this case, insectivorous animals, that is, they eat insects and in doing this, provide one of the world's best insecticides. In Texas the free-tailed bat consumes an estimated six thousand six hundred tons of insects in one year, and Peter Dwyer estimated that Miniopterus schreibersii in the Macleay Valley of New South Wales consume some two hundredweight of insects in a single night. Both these estimates are very conservative, with the pollution caused by chemicals such as insecticides it is well worth giving some thought to the work that these bats must be doing in the South-East of South Australia and, perhaps, to learn a little more about does not seem such a bad idea.

T.H.M.

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CAVES OF THE COASTAL AREAS OF SOUTH AUSTRALIA

by R. T. Sexton.

CEGSA Occasional Paper Number Three, ‘Caves of the Coastal Areas of South Australia’ is back on the market. Stocks of this paper which were previously considered exhausted, are now available in limited numbers. Some misplaced copies have now been found and so this interesting paper recording some of the early work of the Group and supplying a good reference to some of the coastal caves in this state can now be purchased - but hurry, as mentioned before, stocks are limited!

LETTER FROM N. L. BRITAIN, 5TH ENGINEER, S. S. CATHAY,

Dear Sir,

After arriving back in good old Aussie again I received the mag. (Posted 9-2-71, went to Manila, Hong Kong, Japan, received Sydney 26-3.7l) in which you uttered a plea about bats.

If you already know about the colony on Wilpena Pound wall, somewhat East of Pompeys Pillar, well and good, but if not I wish to report one in that area. We, (a few mates and self) saw them flying there last Easter and, if you could send a good, army survey map across I'll mark the position we saw them flying. We did not look properly for their cave because we were clogged from no water. You need to take a good supply of water and a good map, an Adelaide Bushwalker's map was responsible for getting us up to such a place (they missed two creeks and a watershed).

I'll be on leave for sure in June and will be in Adelaide from the 5th or 4th until approx. 30th so if you've got a adventurous soul or two I could take them up to the spot.

He goes on to ask for maps, etc. to be sent by no later than last month. Oh, well. Thanks for the letter, Norm. It is good to see that people are reading the newsletter and responding to what is within it. Regarding these bats, they could very possibly be a tree-dwelling species. There are several species of bats distributed throughout the Flinders Ranges only a couple of which are cave-dwelling. However, the find is, nevertheless, a most interesting one and certainly should be checked out. A trip could possibly be arranged on the June long week-end and further reading on bats in the Flinders Ranges can be found in Mammals of the Flinders Ranges in the book, 'Natural History of the Flinders Ranges'. - T.H.M.

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SEARCH & RESCUE

There will be a Search and Rescue exercise for Squad members and any other cavers interested on the weekend of May 28 and 29 at Naracoorte. The schedule for the weekend will consist of instruction in rope work, first-aid and stretcher handling as well as an exercise in one of the many caves in the area.

Headquarters for the weekend will be the CEGSA hut and I hope that all coming will arrive at a reasonable hour since the weekend will probably be fairly strenuous. However, you will also have plenty of time to make it back to Adelaide at a reasonable hour on Sunday.

Two points to remember-

i) This is not just an ordinary social trip, but a serious trip with the aim of training members of CEGSA in the techniques of Search and Rescue.

ii) Don't come overloaded with gear and remember to bring a notebook.

GEAR

Keep your gear in constant readiness at all times, preferably all in one spot so that it can be quickly packed. Below is a list of an adequate pack. Some items may not be used in normal caving but are essential for S&R purposes.

Sausage bag or rucksack, etc.	Notebook & pencil
Ground-sheet	Sleeping bag
Spare socks	Woollen pullover
Warm & adequate clothing for two days	Wind jacket
Boots	
Overalls	Watch, waterproof or in WP container
2 karabiners, preferably screw-gate	Water bottle
(Stubain 985, 982 or Simite)	Waist loop – 20'
Carbide lamp & spares	Electric lamp or torch plus spares
Matches in waterproof container	Candles
Helmet	Personal First Aid Kit
Hand compass.	

Waist loops should be parachute tape or ¾ circum. polypropylene. If each member of the party has at least 20', this allows the making up of long sections of rope in emergencies without loosing too much strength.

Nylon climbing ropes, Manilla ropes (three eighth diam., one and a quarter circ.), karabiners and compasses of good quality are available from the Scout Shop. Please don't misuse krabs as they have definite limits. When packing your gear please keep it tidy and compact. One important point - don't carry food in cartons.

Anyone interested in coming should contact me as soon as possible.

David Hawke, Phone 496856 - day and leave message,
497070 - before 8 am & after 6.30pm.

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SOME COMMENTS HEARD WHILE GUIDING IN VICTORIA CAVE.

"Now I wonder how long it took to bury all those bones."

"Was the silt washed in before or after the Ark?"

"Perhaps the bones are the remains of an aboriginal orgy."

"Why hasn't someone just walked in before and discovered it - was the gate locked or something?"

"How much did the bones cost?"

A FEW MORE COMMENTS

"How much did them stalactites and stuff cost?"

Best Comment Heard So Far.

Said an Italian gentleman -while pointing at some shawl-like formation formed high on one wall – '***! -** Look at all the "bums on the wall!"

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NARACOORTE EASTER WEEKEND 1971

About fourteen members of CEGSA were at Naracoorte caving over Easter.

T. Maddock and a small group spent considerable time in Bat Cave catching and banding bats. It is quite satisfying to know that bat studies are once again underway after a lapse of several years.

Wombat, Beekeepers, and Tomato-Stick Caves were visited by tourist-type trips. Fox Cave was visited and, while many were looking around, a few others sieved through a pile of sand excavated from a dig and found some quite interesting bones which will be housed in the South Australian Museum. Sarcophilus, the Tasmanian Devil was found among the bones.

Ed Sangster and a few helpers made the solution tube behind Cathedral some five feet deeper. It appears a most promising dig.

A new cave was located six miles from Naracoorte on the Cadgeo Road. It is rather small with a crawl passage about forty feet long around the side of a rock-collapse. A colony of thirty wetas were noted and one was collected for identification.

Harry Baker also took us to another cave on the property of J.B. Swivener. This was shown to me on a trip some years ago and it appears that it has not been recorded or numbered since then.

We visited a cave which was mentioned in an earlier trip report of mine and did have a location on it. It is just out of Naracoorte on the Hynam Road and has a small lake within it with good deposits of calcite flakes on the surface. The water flow was measured with a match and watch at 1.3 feet per minute.

A few people spent most of Monday and some of Sunday working on the hut. Tank repairs and general cleaning were undertaken. It is hoped that a few more of the hut's patrons can find a little more time to spend making the hut inhabitable.

P. A. Chappell.

SHAKE BITE

by P. J. Tunbridge.

CASE:

Potential cave explorer after descending twenty five feet of ladder felt a bite on the calf – time: about 11.30am. On looking down he saw a snake of about three feet length which escaped, not sure of colour. Patient panicked and rapidly ascended they ladder. Was rushed to a car perhaps a quarter of a mile away and driven to the nearest country hospital. He arrived there at about twelve noon. A tourniquet was applied. Patient collapsed becoming cyanosed (blue due to deficient oxygen in blood) and hypotensive. Was given emergency treatment plus 1000 units of brown snake anti-venom intravenously. Patient improved - arrived at city hospital at about 1.30pm and was fully conscious. His left leg was covered in petichiae (small red spots) and large purple bruises due to haemorrhages into the skin. The patient was further treated and given polyvalent antivenom. At 2.45pm the patient had become confused and restless. At 7.30pm the patient's pupils were fixed and dilated and thirty minutes later he stopped breathing. Emergency measures were carried out immediately but there was subsequent progressive deterioration and the patient died soon after.

The above report is fiction - but it could happen. The important point is, however, why did the patient die even though he was given every possible medical aid? The answer is because he and those with him did not carry out a few simple procedures IMMEDIATELY AFTER HE WAS BITTEN that would have saved his life.

How many people actually know what to do when someone they are with is bitten by a snake? How many people can roughly identify a snake when they see it? - A surprisingly large number don't and can’t. This report has been prepared for you to read and ABSORB, then tear out and keep close at hand when walking or trogging in snake infested areas.

CORRECT TREATMENT FOR SNAKE BITE:

1. Until a constrictive bandage is applied, cut the blood supply to the affected area by applying direct pressure to the appropriate arterial pressure point - remember it only takes seven minutes for the blood to complete a whole circuit of the body.
2. Remove clothing from the affected limb so that it will not reduce the effect of the constrictive bandage which must be applied directly to the skin of the upper limb. Apply the constrictive bandage.
3. Wash or wipe the skin clear of venom splashes.
4. Immobilise the limb, place the patient at rest, maintain body heat and try to calm the patient as exercise and anxiety will increase the circulatory rate there by hastening absorption of tho venom into the body. Complete blood stoppage is judged by obliteration of the pulse below the bandage.

5. If breathing is failing, apply artificial respiration.
6. Remove patient to the nearest point of medical aid. Prior notification has the added, advantage in that all necessary arrangements can be made before the arrival of the patient, thus greatly increasing his chances of survival.
7. The bandage must be released after one and a half hours, no sooner, no later, and reapplied slightly above the original position for a further one and a half hours, after which the process is repeated.
8. Identify the snake for correct anti-venom. If it cannot be identified bring it with you - preferably dead.

REMARKS:

The most important part of the equipment used is the tourniquet. In an emergency it is usually a belt, rope or piece of material - but these have small surface areas and will cut into the muscle of the upper limb causing extensive serious and permanent damage. Hence a constrictive bandage should always be included in everyone's kit. They are inexpensive and small. The method of application is to wrap it around the limb gradually pulling it tighter and tighter, the broad surface of the bandage then spreading over the area of contact and thus minimising injury to the muscle.

The most important procedure after this is to clean the wound of venom. The tiger snake, for example, bites very quickly and tends to spray the venom over the surface of the wound as the fangs come out. This must be washed away and if no water is available urine will suffice.

Under no circumstances should the wound be cut. This only gives the poison greater access to the blood stream, as well as causing extreme trauma and pain to the already anxious patient. By all means apply direct pressure and gently squeeze the wound - but remember that you are trying to save someone, not disfigure them.

Two other useless procedures are-

to suck the wound; why run the risk of poisoning yourself,

to apply Condy's Crystals.

These have no use and are not recommended.

The best rule of all though is to watch where you are walking, to look around before you get off the ladder, and don't get bitten in the first place.

(See Snake Recognition Guide on Following Page).

	GUIDE TO THE IDENTIFICATION OF SNAKES		
SNAKE	**DISTRIBUTION**	**GENERAL FEATURES**	**SCALATION**
Tiger Snake	Vic, NSW, SA, Tas, southern Qld	Ave length 3ft 6in, broad head, light grey to dark green or orange. Dark traverse bands.	Dorsal scales 17-19. Anal plate entire. Sub-caudals single.
Death Adder	Qld, NSW, SA, WA, NT	Length – 9in to 3ft. Short body, banded tapering adder-like tail, broad head.	Dorsal scales 21-23. Anal plate entire. Sub-caudals single – last few divided.
Taipan	Qld, NT	Up to 6ft long. Brown spotted belly. Distinguished from others by scale arrangement.	Dorsal scales 23, indistinctly ridged & anal plate entire. Sub-caudals paired.
Brown Snakes: Common, Dugite, Gwarde	Throughout Australia	Up to 6ft long. Slim, rapid movement. High striking. Dark brown to putty coloured. Mostly have cream spotted belly. Young may be banded.	Dorsal scales 17 (Dugite 19). Anal plate divided. Sub-caudals paired.
Copper Head	NSW, Vic, south east SA, Tas	3 to 6ft long. Sluggish, thick set. Yellow brown, lateral scales orange or red, white tips.	Dorsal scales 15. Anal plate entire. Sub-caudals single.
King Brown or Mulga Snake	Throughout Australia except Tas	Up to 8ft long. Copper brown to tan. Belly not spotted.	Dorsal scales 17. Anal plate divided. Sub-caudals paired.
Red Bellied Black Snake	East Australia, Vic, south east SA	Up to 7ft long. Glossy black with purplish sheen. Lateral & scales red	Dorsal scales 17. Anal plate divided. Sub-caudals paired.

GLOSSARY OF TERMS

ANAL PLATE	Plate pertaining to, or situated near the anus.
ANTI-VENOM (also polyvalent)	Agent neutralizing snake venom. General antivenom used against the bites of all snakes.
ANUS	The opening of the alimentary canal through which undigested remains of food, bacteria etc. are expelled.
CYANOSED	Blue colour due to deficient oxygen in the blood.
DORSAL SCALES	Situated at or near the back.
HAEMORRHAGES	Escape of blood from circulatory system, bleeding.
HYPOTENSIVE	Physical state brought about due to deficient oxygen in this case. Related to cyanosed condition (see above).
INTRAVENOUSLY	Fed through the veins.
PETICHIAE	Small red spots.
SUB-CAUDALS	Scales adjacent to or along the backbone.
TRAVERSE BANDS	Bands running around the body perpendicular to its length.
TOURNIQUET	An instrument for stopping the flow of blood through artery by compression.
VENOM	Poisonous fluids secreted by serpents, scorpions etc.; introduced into the system of the victim by bite or sting.

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THE FOLLOWING PUBLICATIONS ARE AVAILABLE FROM THE LIBRARIAN (Ed Sangster)

Mullamullang Cave Expeditions, 1966.	$1.50
Cave of the Nullarbor, 1967.	$1.35
A Preliminary Report on the Karst Morphology of the Nullarbor Plain.	$1.20
Transcript of the Proceedings of the Seventh Biennial Conference of the A.S.F.	$1.40
Caves of the Coastal Areas of South Australia	$1.15

All prices include postage within Australia

Visit to the Cave on the Property of W. Pavy.

In an endeavour to prevent further desecration to caves at Naracoorte the Group's Committee has requested the owner of Fox, Smoke and Haystall Caves not to permit anybody to enter the caves unless official notification has been made.

Permission will only be granted to those people on a Group Committee sanctioned trip and whose wish to visit the caves has been notified by a letter from the Group's Secretary.

PAC

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COMMITTEE MEETING

Visitors will be welcome at any Committee Meeting. It is requested that the visitor first notify the Chairman or the person at whose place the meeting will be held of his intention to attend.

PAC

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CONGRATULATIONS

- To Pat and Tony Lake on their engagement.
- Grant and Leslye Gartrell on the addition to the family.
- Gary Havens and Colleen Frost on their engagement.

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HUT AT NARACOORTE

The following donations for the Hut at Naracoorte will be gratefully accepted by the Committee:

Ash trays
Paint and Brushes
Linoleum
Spring loaded door and closer for screen door
Ajax
Refrigerator
Hot water system
12 Gallon drums for rubbish bins

It is hoped that later on when the Hut and its contents are treated with a little more respect, it can be stocked with kitchen utensils, crockery and cutlery.

PAC

YOUR COMMITTEE THIS YEAR IS –

President	- Ern Maddock
Vice-President	- P.A. Chappell
Secretary and A.S.F. Representative	- T. Lake
Treasurer	- M. Bateman
Publications	- T.H. Maddock
Membership	- P. Tunbridge
Quartermaster and S&R Leader	- D. Hawke
Librarian	- E. Sangster

CONSERVATION SUB-COMMITTEE –
R. Wells
G. Gartrell
R. Bowen

SOCIAL SUB-COMMITTEE -
P. Chappell
T. Maddock
T. Lake
M. Bateman

S&R SUB-COMMITTEE -
D. Hawke – S&R Organiser
R. Bowen
P. Chappell

NARACOORTE HUT IMPROVEMENT SUB-COMMITTEE -
P. Chappell
T. Maddock
E. Sangster

If anybody feels they can, in someway, help these Committees, could they please get in touch with any of the members.

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- NOTICE –

Have you paid up your membership fees? If not, this could be your last newsletter. Full members are likely not to receive A.S.F. Newsletters if they do not become financial by the closing date.

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