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CAVE EXPLORATION AND CAVING POTENTIAL IN THE CHILLAGOE AREA

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In the closing decade of the last century, a noted English botanist and painter, Mrs. Ellis Rowan, visited the area under review, as guest of the pioneering Atherton family on Chillagoe Cattle Station. Later in her book "A Flower-hunter in Queensland and New Zealand" published by John Murray - London in 1898, she recorded the following impression:

"I was driven there in a small one horse trap, the material of which needed to be of the strongest for the road was an exceedingly rough one, being for the most part over broad beds of rock and pebbly ground. The whole country is a vast undulating plain, dotted with rugged masses of curiously outlined limestone ridges rising to many hundreds of feet straight out of the ground, giving the landscape a stern and oppressive grandeur. The deep fissures of these towering walls are filled with gnarled and hoary trunks of trees, striking and grasping the massive fragments with their rootlets and creeping and twisting in and out of crevices. Below, the huge blocks of stone are overgrown with an intricate wilderness of shrubs and creeping plants, while high above, these dark and towering walls are destitute of any living thing, and their stricken, shattered looking peaks, networks of sharp pinnacles with needle like points, stand grey and arid looking against the intense blue of the sky".

Today, after three-quarters of a century of mining and pastoral activity, the visitor to Chillagoe can still experience the thrill and fascination of this unique landscape and also the discomfort of that rough road which still has sixty miles of unsealed surface with numerous creek fords and corrugations. Few who make the journey go away dissatisfied. Chillagoe can offer something for everyone.

Apart from the scenic grandeur, the follower of history can fossick around the old derelict mines and smelters or browse through the museum at the Post Office. The geologist can study the multi-stratered and mineralised rocks of the Palmerville Fault and ponder the explosive influences which gave birth to the topography of the area. The "rock hound" can find specimens and those interested in fossils can have a field day among the remains of the inhabitants of a long lost Silurian-Devonian sea, or the bone breccias of the more recent past in some of the caves.

Camped by Chillagoe Creek, the holiday maker can just relax and enjoy life far from the rushing crowds of the cities.

The speleologist can have a field day!

Here we have a limestone belt some 60 km long, with a width of 1-6 km, broken in places with granite intrusions and beds of chert. The area is dotted with bluffs, some large, some small, and the general belief is that few lack caves. Because of the inaccessibility from major centres of population, the area from a caving point of view is still relatively unknown. Many of the more accessible bluffs have been looked at superficially by interested people but records were seldom kept. In the mining boom days guided tours of a few of the major caves were organised for keen tourists who bumped over the road to see them. Some attempt was made to improve access by walking tracks, but with the collapse of the mining period, and the decline in the population of the area, most fell into disrepair, and with the exception of one or two caves, visitors seldom reached some of the more impressive areas.

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One of the major tasks for a speleological club here will be that of rediscovery and documentation. Even so there is still plenty of virgin territory to be opened up by using more sophisticated methods of scaling, laddering and of course the opening up of "digs".

Following representations, National Park status was given to parts of the area in 1943. Honorary rangers were appointed to establish the locality of caves and by 1966, the Forestry Department, National Parks division recognised the need for a full time ranger and appointed Mr. Vince Kinnear, to co-ordinate development work in and around the National Park and to organise conducted tours of selected caves for the growing tourist traffic.

The geology of the area has unfortunately provided a conflict of interests with other governmental departments, notably the Mines Department, and because mining is not allowed on a National Park, the park as we know it today consists of isolated parcels of land, containing the more impressive limestone bluffs. Between them lies land subject to mining leases. Extension of the park boundaries will come as a result of exploration and co-operation in research by the government departments concerned and in this field of discovery and documentation of cavernous areas, speleological clubs can play a vital role.

Such documentation was begun early in 1960 by a few interested individuals and the Queensland Forestry Department, National Parks section. Apart from the job done by Mr. Vince Kinnear, mentioned earlier, recognition must also go to the assistance given by Frank Trezsise, Peter Freeney, John McKeegan and Allan Cummins for much of the early work. Then, between 1966 and 1970, the Sydney Speleological Society visited the area and produced several maps, including a limited area map from aerial photography, and also an Occasional Paper "Communications No. 3". Surveys were also done of several of the major more accessible caves, including the Royal Arch, the Donna, Markham, Spring, Haunted and the Ti-tree. The latter contains a very interesting bone breccia from which the remains of the extinct Diprotodon have been recovered. The formation of the Chillagoe Caving Club in 1973 enabled local cavers to co-ordinate their efforts.

Club membership is drawn from a wide range of age groups, and includes some with overseas caving experience, and others with disciplines of a nature which add expertise and guidance for the less experienced. Seasonal and road conditions have posed problems. The area was inaccessible for five months during the last wet season. Because of the problems of getting there, members prefer to have as long a stay as possible.

The longer holiday weekends in Queensland all fall in the wetter half of the year when planned meets are liable to be washed out by impassable roads or flooded caves. During the drier season locals are generally too busy with occupations of a seasonal nature which limit time away from the job. Meets at Christmas and the May-June period have been the most popular, while individual members have made visits whenever they could spare the time during the rest of the year.

Co-operation with the Forestry Department has been excellent. All are keen cavers and the major office bearers of the club. Since its formation the club has built up a supply of electron ladders and ropes for use by members and visitors. A limited supply of helmets are available but in the main, head gear, foot gear and lighting are a personal responsibility. As 240 volt mains supply of electricity is now available at Chillagoe the charging of accumulator type batteries is no problem, provided of course that you camp in Chillagoe!

Prior to the establishment of the club, the index of known caves stood at 120. Despite adverse seasonal conditions the index has now been increased to 150, while numerous entrances have been found to previously known caves. Work has begun on extending the area map produced by the Sydney Speleological Society to include the magnificent bluffs on Rookwood Station continuing to the Walsh River at the N.W. end, and to the Ootan-Almaden area in the S.E.

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Surveying has been carried out in conjunction with exploration and has aided greatly the discovery of new caves and extensions. Thirty surveys have been undertaken using CRG 5 as a standard, and they have exposed an interesting series of geological fractures, where a preferred 15^{o} - 20^{o} of fault has occurred in widely separated bluffs.

The chief areas of interest have been the Royal Arch Bluff at Chillagoe and the Cathedral Bluff at Mungana. However because of possible mining activity in and around bluffs not as yet on a National Park reserve, attention was focussed on the Ryans Creek and Suicide Bluff areas to prove what was at risk.

Both bluffs were found to be cavernous and beautifully decorated, Ryans Creek CH 123 (4 entrances) containing some of the largest shawls yet discovered in Chillagoe, and with ease of accessibility, this cave would make an ideal "tourist" cave in the future.

Representations have been made to have this area declared a National Park and attached as an extension to the Spring Bluff Reserve.

Suicide Bluff provided somewhat a surprise and continues to be quite a challenge. By means of laddering techniques, vertical descents have been made in excess of one hundred feet into vast, beautifully decorated chambers some of which contain permanent water. Here in Christmas Pot (CH 144) as in Narahdarn Cave (CH 34) in the Carpentaria Bluff, a species of colourless shrimp has been discovered, part of the interesting eco-system of the Chillagoe area. Christmas Pot also contains a swiftlet colony of considerable size and the clicking and chirping of these unique birds can be heard as they navigate, using a method of sonar in the darkness.

In the Royal Arch Bluff area several new caves have been added to the index. Discovered and surveyed by Paul and Hazel Wilson in 1973, Rift Pot (CH 127), with its delicate decorations and its animal life is a beautiful cave which will delight any visitor. The bluff area housing the Disney (CH 45), shows great promise of extension and could eventually link with Kirkies Cavern (CH 48) by way of an interesting series of grikes. This area awaits a survey to supplement the exploration.

Chinese, Concave and Compass Caverns (CH 138, 134, 143) and Uncle Ron's Cavern (CH 135) all have been discovered and surveyed by club members in the area in the past year. In the Piano Bluff area, "Big Hole 66" discovered by Ralph Page in 1973, introduces the caver by way of a series of vertical descents, into a highly fossiliferous area where the entire walls of caverns consist of masses of crinoids, corals, bryazoans and brachiopods, some of which because of weathering have a three dimensional effect. Notwithstanding all these interesting finds, the major club project has been and will continue to be for some time, the exploration of the vast cave complexes within and what was formerly referred to as the "Cathedral Bluff" at Mungana, but which has now been called "The Queenslander".

"The Cathedral Bluff is a very promising area". So stated the Sydney Speleological Society as an end piece to their description of the old Cathedral Cave (CH 15) in "Communications - Occasional Paper No. 3". Situated half a kilometer to the north of the Chillagoe-Mungana Road and about one kilometer from the site of the old Mungana itself, the bluff is rather impressive with pinnacles towering in excess of 200 ft over the plain. Relatively compact in shape with a perimeter of approximately two kilometers, the bluff can be subdivided into five regions.

The north-west section contains what was originally the Queenslander with its many extensions, including the old Cathedral Cave (CH 15), linked by the Club in July 1973. To its east lies a large central area of collapse, actually a large doline which rises with a most impressive north-eastern wall as yet to be explored. To the south of the collapse and extending to the south-east like a giant backbone is a region of high bluff which has been called Super Grikeland.

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Here we have a region of giant grikes exceeding thirty metres in depth, carpeted with ferns and the occasional stinging plant and fig tree, interconnected by numerous passages. This section contains the New Southlander (CH 81), discovered by Sydney Speleological Society, Broadway (CH 148), Epi Frenetic (CH 84), and Fox Hole (CH 145), which were linked in November 1974, and all of which lie parallel and adjacent to the old Queenslander complex.

In the S.E. corner we have the junction between the N.E. wall and Super Grikeland, an area yet to be looked at, this region terminating in a low ridge containing Hair Cave (CH 95, 96 and 97).

A feature of this bluff to date is the large number of apparently parallel fractures, evidence of its explosive genesis, along which cave systems have developed. Over twenty surveys in this bluff alone are laying bare the secrets and aiding in the exploration of what is a system of great size. The compilation of our bluff map has been the end result of a lot of hard work by club members, and without this team work the Queenslander would still be an unknown quantity. Although large areas still remain unexplored, Saturday, December 14th, 1974 was a red letter day for the club when Fred Hipworth, one of a party exploring an area of the Queenslander, dropped down a passage from high on a cave wall and found himself on familiar ground in Fox Hole, Super Grikeland, thus linking and extending the Queenslander to include the known caves of that area, Fox Hole (CH 145), Broadway (CH 148), Epi Frenetic (CH 84) and the New South Lander (CH 81).

The very nature of this cave system makes the survey difficult and the compilation of cave footage a question mark. In order to get the job underway it has been necessary to take the more direct route and the lineal survey footage is doubtless, only a fraction of the actual cave footage available by way of rockfall, solution tunnels, avens and numerous areas of tiered flowstone floor all of which are so common and characteristic of this bluff.

Present surveyed lineal measurement of the Queenslander stands at 3,440 metres (11,300 ft), which can be expanded to 5,000 metres (16,500 ft). Exploration is by no means complete, and there is every possibility of extending the Queenslander further into blank areas on the survey map or into the remaining third of the bluff yet to be looked at. To date it is the largest known system in the Chillagoe-Mungana area, possibly the largest in Queensland and must be one of Australia's top class caves.

In the near future an attempt is to be made to photograph areas of great beauty in this cave. In fact the area lends itself to the photographer both above or below the ground. Many very spectacularly decorated caves are easily accessible with minimum risk of damage to equipment. However, the size, colour and lighting pose quite a challenge to the photographer.

The immense area of limestone in the Chillagoe-Mungana area will make documentation and exploration a challenge for years to come. But the belt of limestone does not end at the Walsh River. Rather it disappears below a layer of sandstone to reappear again some 60 kilometres to the north at the Mitchell River. From here a chain of impressive looking bluffs march north for some 50 kilometres to the Palmer River.

From the air they look equally as impressive but ground access by road is difficult and it will take a well equipped and supplied expedition to further explore the area. Members of the Sydney Speleological Society visited portions of this area in August/September 1972 and their report can be read in their journal (See *J.Syd.Spel.Soc.*, 17(3), 64-67).

The overall area is of great scientific interest. The bluffs themselves give rise to a unique eco-system differing from the surrounding plains and the botanist and zoologist are attracted by their relatively undisturbed state.

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Every year sees a procession of scientific individuals to the area and the general comment is that much more research needs to be done in many fields. Questions rather than answers seem to be the rule. It is of vital importance to the area that this research be done before any large scale developmental activity be undertaken. This does not necessarily mean that mining or quarrying should be eliminated, rather a co-operative approach should be undertaken so that the area's uniqueness as a plant and animal habitat can be preserved, together with its scenic charm above or below ground, for future generations of mankind to enjoy.

Achnowledgements

Mrs. Ellis Rowan "A Flower-hunter in Queensland and New Zealand" published 1898 John Murray, London.

The Sydney Speleological Society. "Communications" Occasional Paper No. 3.