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R. Michael Bourke

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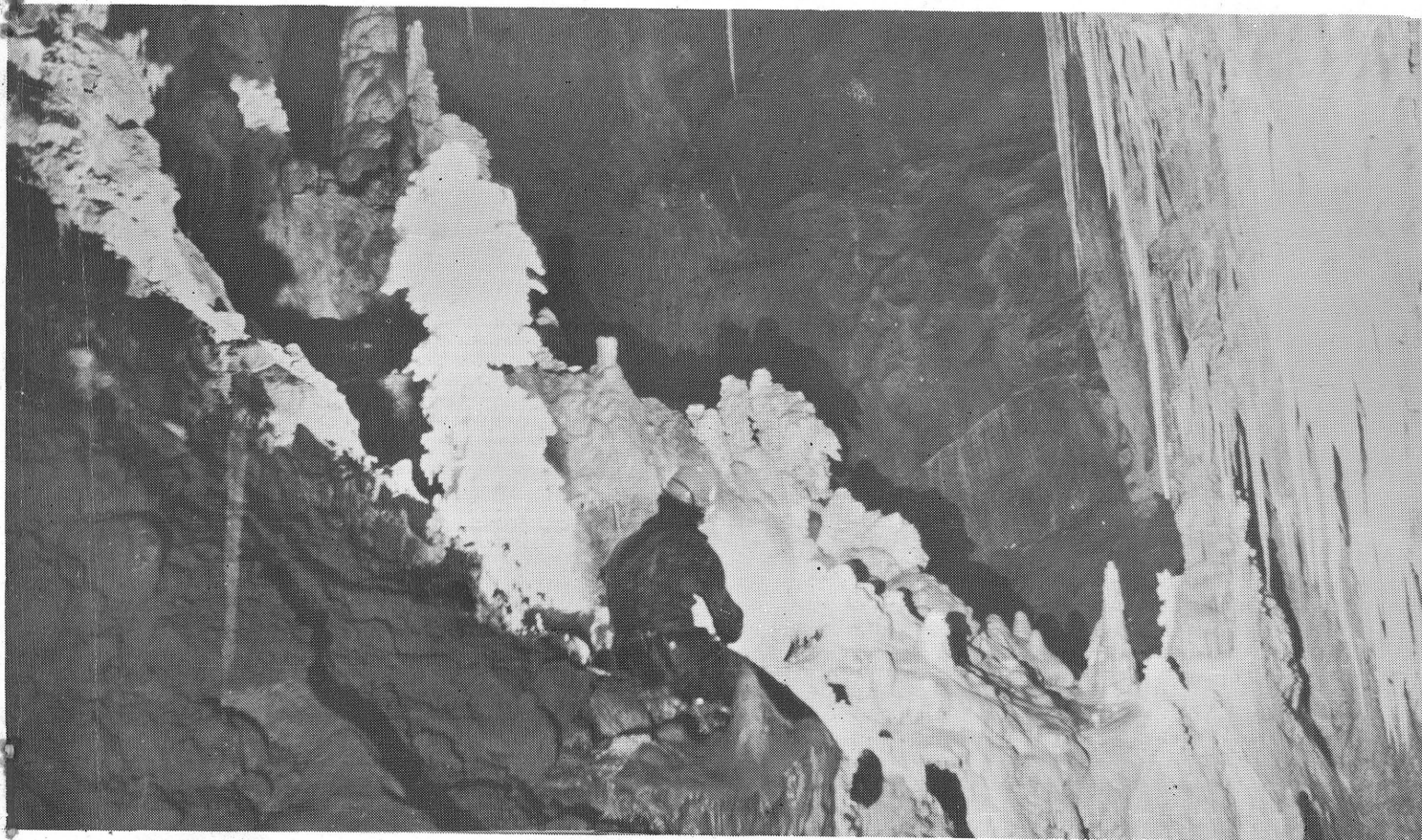
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Volume 3 Number 2

April 1975

NEWSLETTER OF THE PAPUA NEW GUINEA CAVE EXPLORATION GROUP



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Niugini Caver is the newsletter of the Papua New Guinea Cave Exploration Group. The PNGCEG is an informal association of persons engaged in speleology in Papua New Guinea, and is an associate member of the Australian Speleological Federation.

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Cover Photograph. The first chamber in Bibima cave at about 250 m down. Bibima in the Porol Scarp is the deepest surveyed cave in the southern hemisphere. See article on p. 61 on the second descent.
Photo by Howard Beck.

* * *

TOKTOK BILONG EDITA - FOCUS ON THE EASTERN HIGHLANDS DISTRICT

Again we bring together a series of articles and a bibliography on the one district, this time the Eastern Highlands. I have never caved in the E.H.D., so it is difficult to edit such an edition satisfactorily. I encountered the usual problem of different authors using different names for the same feature, especially for Henganofi. Despite the 34 entries in the bibliography, there is not an extensive literature on the caves of the District. However articles in this issue cover the known caves fairly well. All the areas in Champion's (1968) list are covered.

Limestone is not prominent on the geological maps of the District, particularly in the northern half where the highway, major settlements and most of the reported caves are. South of Okapa there is a belt of limestone that continues almost to the Papuan coast at Kerema. There are also reasonably large outcrops south of Mt. Michael. The general impression I have is that there is a series of scattered outcrops and caving areas throughout the District. According to my count, some 45 caves have been reported which is hardly startling. Apart from Hells Gates and the Lamari River area, the caves are neither extensive nor deep. However cave art is very widespread and burial caves are fairly common. There appears to be a lot of room for finding more caves in both the established areas and in the south of the District.

Henganofi was one of the three areas that the PMSS concentrated on in the early sixties. Kev Read, who was the keenest caver in the highlands at that time, wrote as follows for the 1963 PMSS Goroka Branch Annual Report: "It would be difficult to overrate Henganofi as an exciting caving area. Deep, dangerous river caves connecting huge caverns and mystifying side entrances all add up to give what must be one of Australia's most thrilling known caving areas." All seven caves given by Champion (1968) are covered in three articles inside apart from "Gouffre Lar" which he gives as "200 ft. crevasse cave; tributary stream". Perhaps it is part of Hells Gate?

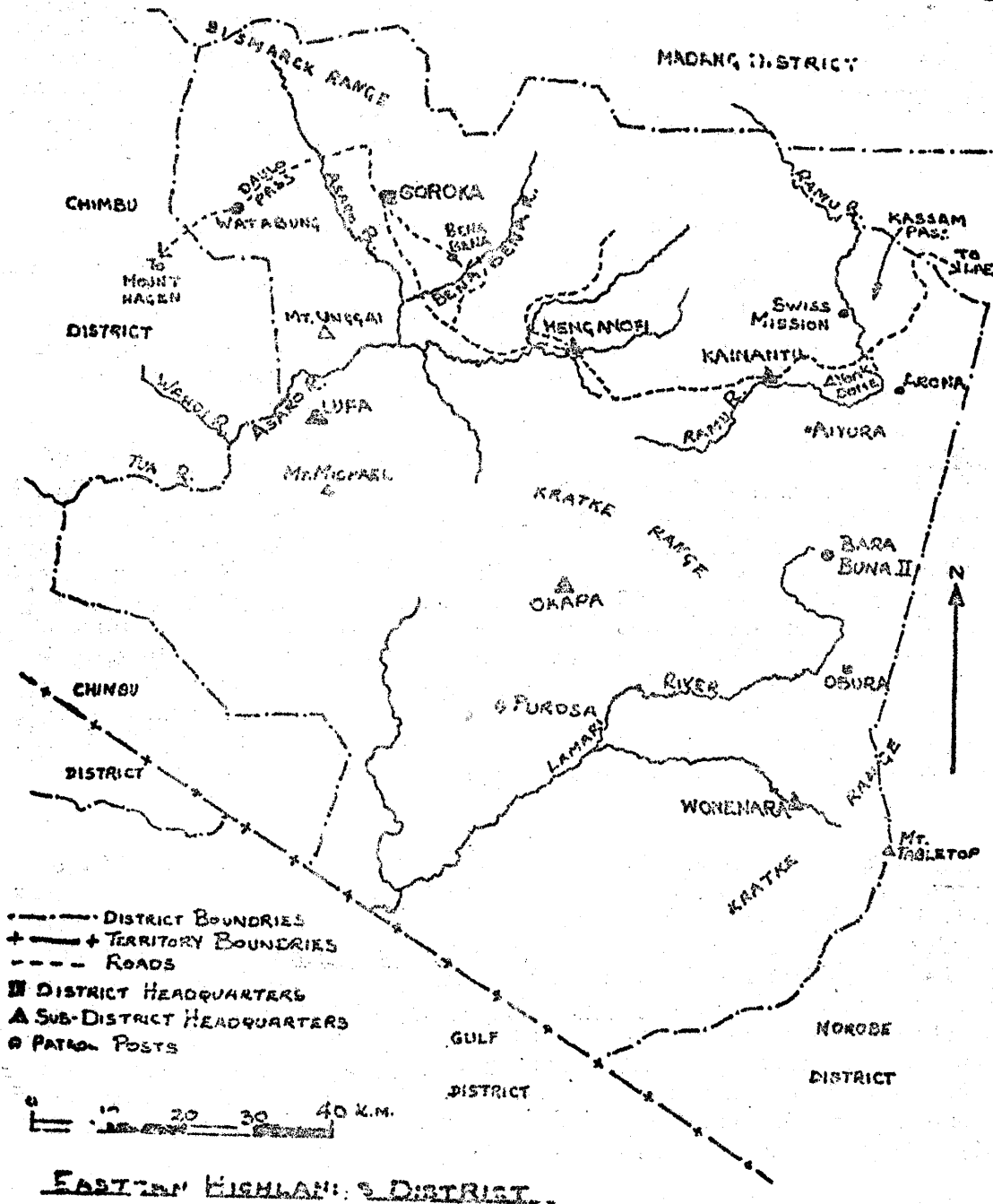
Much of the published literature refers to archaeological work by J. P. White at Aibura near Kainantu, at Batari on the Lamari River and at Kafiavana rock shelter south of Goroka. Aibura is probably the most written about cave in P.N.G. Kev Wilde gives a description and a map inside. Fred Parker in his comprehensive article provides descriptions from 11 areas in the Kainantu region, including the very impressive Lamari River caves. Rumours of sinkholes in the highlands so deep that bodies could not be recovered from them are common - perhaps it is the same incident repeated in various ways? Inside Fred documents a doline near Obura where three murdered Chimbuses were thrown in 1963 and only one body recovered.

Other areas in the E.H.D. not covered in this issue are as follows: White (1972) gives descriptions of Batari cave and Kafiavana rock shelter; Parker (1970) describes six caves from the Unggai Division near the boundary of the Chimbu; Parker (1974) gives information on caves in the Yagaria division near Lufa; Brass (1964) mentions two caves near Okapa, an unnamed one beyond Okapa and Esindona cave near Ilafo (pp. 175, 176, 200) and refers to caves on Mt. Michael (p. 197); and Leahy (1936, p. 232) mentions cave-dwellers in the side of a gorge. I cannot trace the exact location of the last one.

Finally a word of warning. Parker's and Wainwright's articles were written in 1964 and Read's in 1963, so information on access and villagers' attitudes is likely to be somewhat inaccurate now.

REFERENCES. See bibliography.

R.M.B.



HELLS GATES CAVE, HENGANOFI, EASTERN HIGHLANDS DISTRICT

Kevan A. Wilde *

History. The Goroka branch of the Port Moresby Speleological Society visited Hells Gates in a series of trips in 1963. The trip reports are held by the PNGCEG, and two of them have been published (Read, 1974). The author and others visited the cave in August, 1974 (Wilde, 1974) and again in March 1975. The cave is frequently used by the local people to hunt flying foxes (Tambara) and is well known by them. So well known in fact that two of the formations Neita and Neisoba have been given individual names. Neita is a collapsed stalagmite whilst Neisoba is still in situ. Our informants stated that the formations were considered to be mythical people, but were unable to provide any further information. Local mythology accounts for the existence of the cave in the following manner:-

There were once two skeletons that were chased by two women over the mountains and down valleys until they came, exhausted, to the site of Meremere Yiapinka (shaft). The women were beating the skeletons with sticks, and in their haste to get away, they struck the rock with stone axes and the rocks opened up forming the cave. (The account is, in fact, more elaborate, but I had difficulty in translating and intend to return and interview an elder to obtain a more detailed description.)

Description. The names used are the local names with the exception of the main chamber, Tambara chamber, which was named by the author. Entrance to the system is most easily gained through Susu (bat) Tunkunke entrance, which is taking a small stream, Kirimifamu and is steeply sloping for about 75 m where a vertical pitch of 11.3 m is encountered. This pitch can be rigged with a ladder using a wedged log as a belay. This log is used by the local people for tying on vines to descend hand-over-hand when on hunting trips. A small, muddy chamber with no formation follows, where the system changes its westerly direction and takes up a northerly one for some 50 m. In this section there is a very distinctive stalagmite with white calcitic covering. A stream enters at this point (unexplored) and there is a high level passage after 20 m (unexplored). The passage then takes a south westerly course for some 90 m and leads into Tambara chamber.

Tambara chamber is approximately 50 m wide and has a steeply sloping, guano covered floor (see survey). It is used as a roost by flying foxes (unidentified), the population being of the order of several thousand. A large number of pink leeches inhabit this part of the cave and there are numerous species of insects. The roof of the cave varies from 10-20 m (estimated) above floor level and the main stream Meremere Yiapinka travels along the westerly wall. The stream flows in a north to north westerly direction, for some 140 m in all, along a well developed stream passage. Ofafunga stream enters this passage after some 70 m and remains unexplored. The survey of the main passage was abandoned at the sand bank where the roof is low. It is planned to survey this section in the dry season.

* P.O. Box 1055, Goroka, E.H.D., P.N.G.

Travelling upstream of the main chamber for some 100 m is a well developed stream passage Meremere Yiapinka which leads into the bottom of a 50 m deep, collapsed shaft. The shaft was not surveyed due to the volume of water (a survey will be carried out in the dry season) and the dimensions are only estimated. About half way along this passage, almost against the northern wall, are the two formations known as Neita and Neisoba. Meremere Yiapinka is subject to severe flooding which in turn blocks the floor of Tambara chamber according to local informants. Kirimifamu passage could flood completely.

The name Murifinka for the cave used previously (Wilde, 1974) is incorrect as this is a general term for any cave in the Kafe language. As there are a number of local names that refer to this cave I suggest that the original European name Hells Gates be employed for record purposes.

References. See bibliography.

EDITORIAL NOTE ON HELLS GATES CAVE

According to the PMSS reports the river Lethe flows into the Hells Gates entrance which Kevan marks on his map as 50 m (est.) shaft. From all accounts this entrance is extremely impressive. Their reports also refer to two other caves, Blue Peter and D.J.s. Blue Peter appears to be a passage in the cave and a tributary of the River Lethe. D.J.s seems to be the Susu Tunkunke passage of the cave.

"Karata" (1972) (actually Bob Bates) uses the name Murifinka for the Susu Tunkunke entrance, and Hell's Gate or Tintinpankai for the Hells Gates entrance. His account of the formation of the caves is similar to the one recorded by Kevan, but more involved and includes a woman who availed herself of an immodest liberty with a sleeping spirit. He records that the Henganofi caves first became known to Europeans when a Patrol Officer visited them in 1937. Read and MacGregor (1967) investigated Hells Gates as a possible tourist cave and concluded that it is not suitable as such.

* * *

TWO SMALL CAVES NEAR HENGANOFI, EASTERN HIGHLANDS DISTRICT

K. Read *

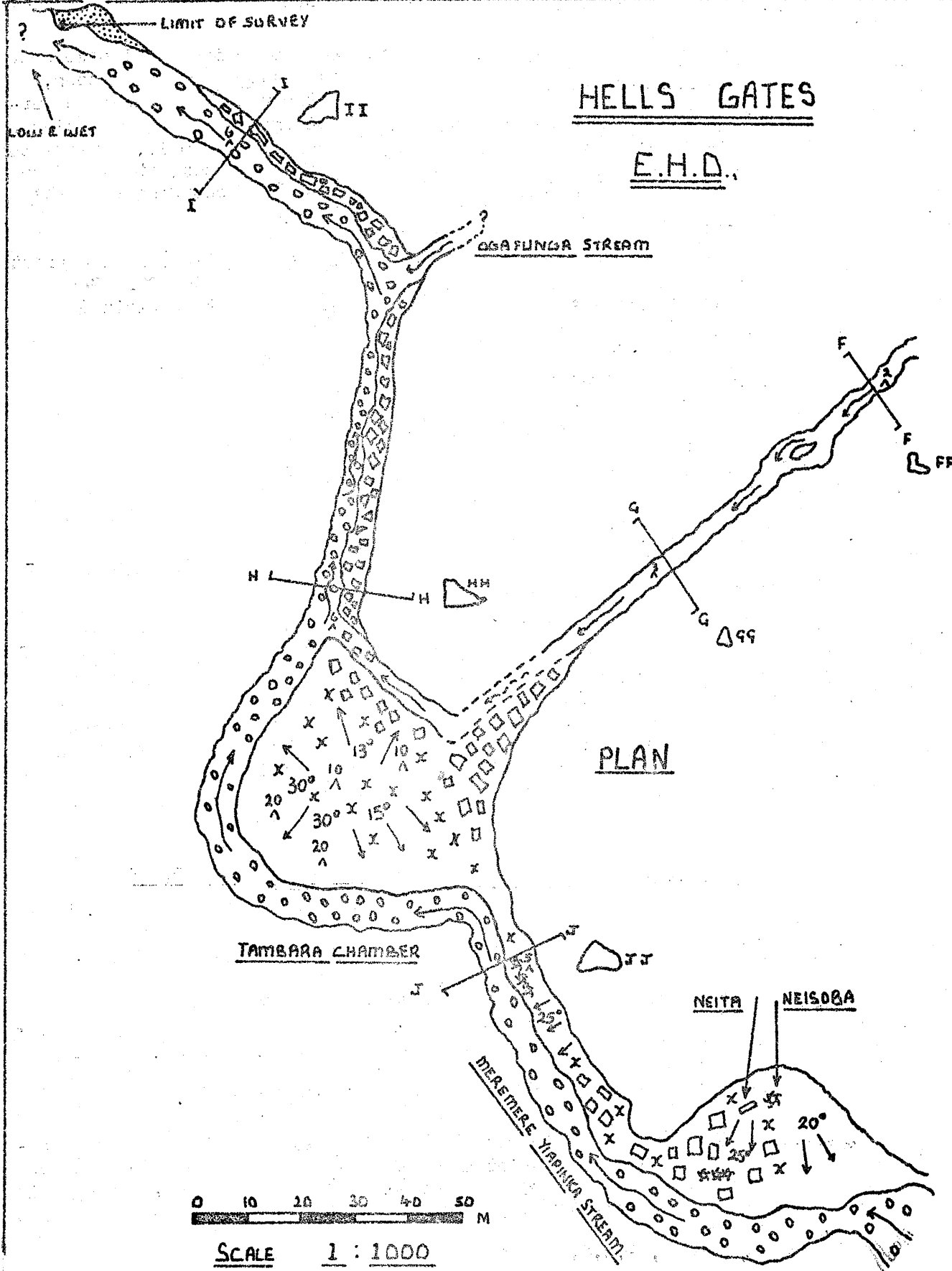
On Sunday 31st March, 1963, I visited two small caves near Henganofi.

The Tomb. Three kilometres past Henganofi on the right side of the road can be seen sharply fluted limestone outcrops. At the base of these is a collapse entrance and a long dry river passage 3 m wide and 4.5 m high. Thirty metres in is a low rock wall with a human skeleton wrapped in a blanket lying beyond it. There is some reasonable formation near the entrance.

Second Source. Three hundred metres above is a similar entrance and passage. After 45 m a squeeze is negotiated and the passage seems to end, although there are some tree roots and a strong draught. While returning my torch failed (I was alone) but fortunately I was carrying waterproof matches, and a safe return was made.

* P.O. Box 5983, Boroko, P.N.G.

* * *

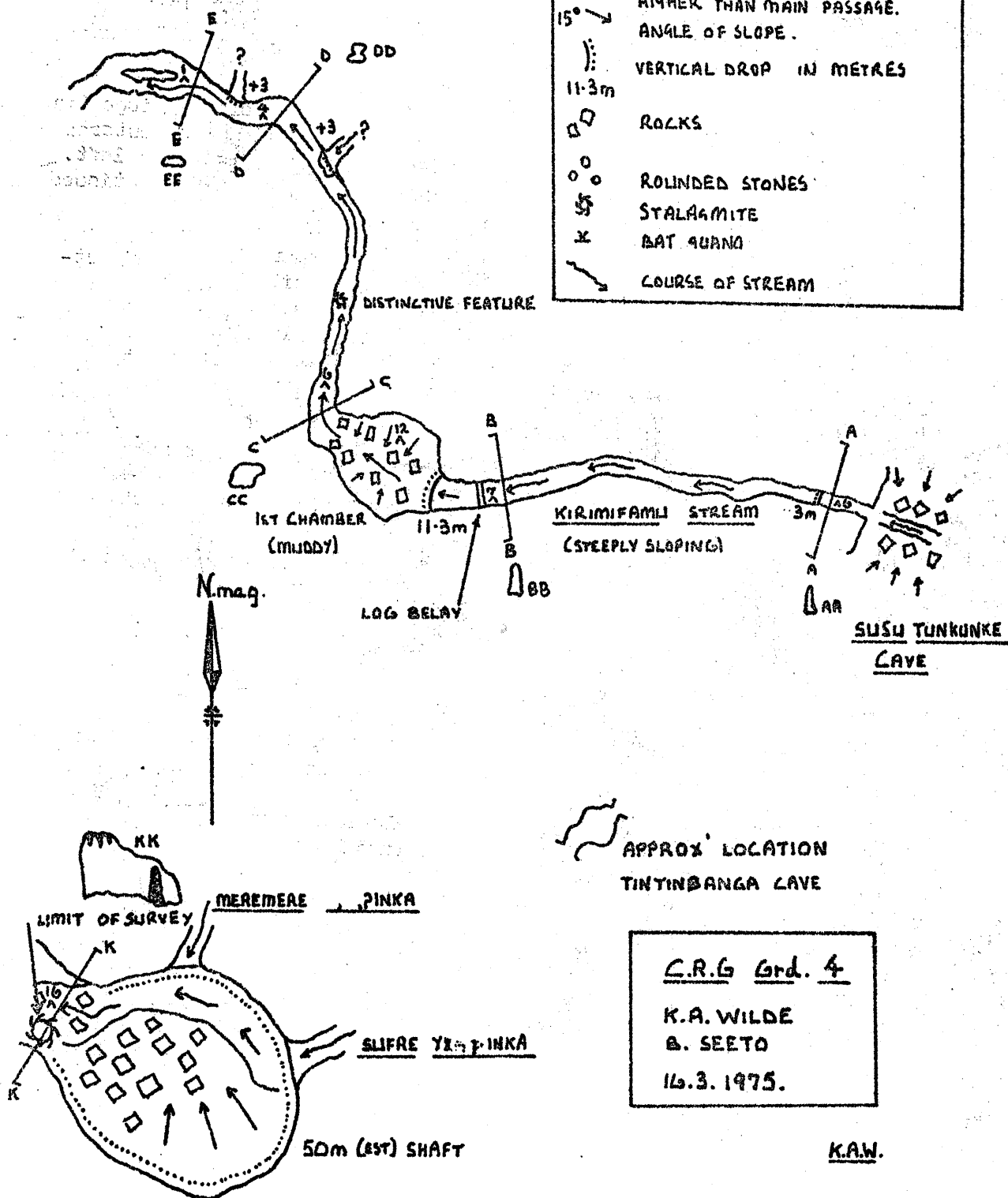


HENGANDOFI

P.N.G.

LEGEND.

- 12 HEIGHT OF ROOF (EST) IN METRES
- +3 INDICATES THAT PASSAGE IS 3m HIGHER THAN MAIN PASSAGE.
- 15° ANGLE OF SLOPE.
- 11.3m VERTICAL DROP IN METRES
- ROCKS
- ROUNDED STONES
- STALAGMITE
- BAT GUANO
- COURSE OF STREAM



NEW TERRITORIES AT HENGANOFI, EASTERN HIGHLANDS DISTRICT

Jim Lynch *

On Sunday 21st July, 1963, Clive Champion, Don McLean and Jim Lynch set off from the junction of the track that leads to Hells Gates and the back road to Lufa to examine the outlet of the River Lethe. The local villagers had given assurances that there was only a large pool from which water flowed. This was the point at which Lethe was supposed to emerge.

On crossing the drainage ridge (which actually is the doline which forms Hells Gates, D.J.s, and Blue Peter), we proceeded down another ordinary ridge for a hundred metres or so when we were confronted by a marvellous limestone outcrop that extended for approximately 800 m down the centre of the valley on our left. Since our prime objective was the examination of the probable outlet we continued down to that point.

Our guides showed us the track down a ridge which runs parallel to the outcrop of limestone. The limestone is on the left hand side whilst going toward the outlet. After approximately 1 hours walking we came across a pool of water at the bottom of this limestone ridge previously mentioned. It was as the villagers had said but the geology of the area suggested possible openings higher up in the rock face. On close examination, four of these were located. The openings were relatively small (60 cm x 60 cm) but once inside the area of comfortable movement was increased. Each cave was very similar in structure. All had a drop to the floor of 3 m or so but it is possible to descend without too much trouble. Once inside exploration was terminated practically immediately. Every cave had still deep water in it and progress for any appreciable distance will be impossible without the use of a raft of some description. (Note: in the River Lethe in Hells Gates, a similar situation was encountered, and li-lo's were found to be a very satisfactory means of transport.)

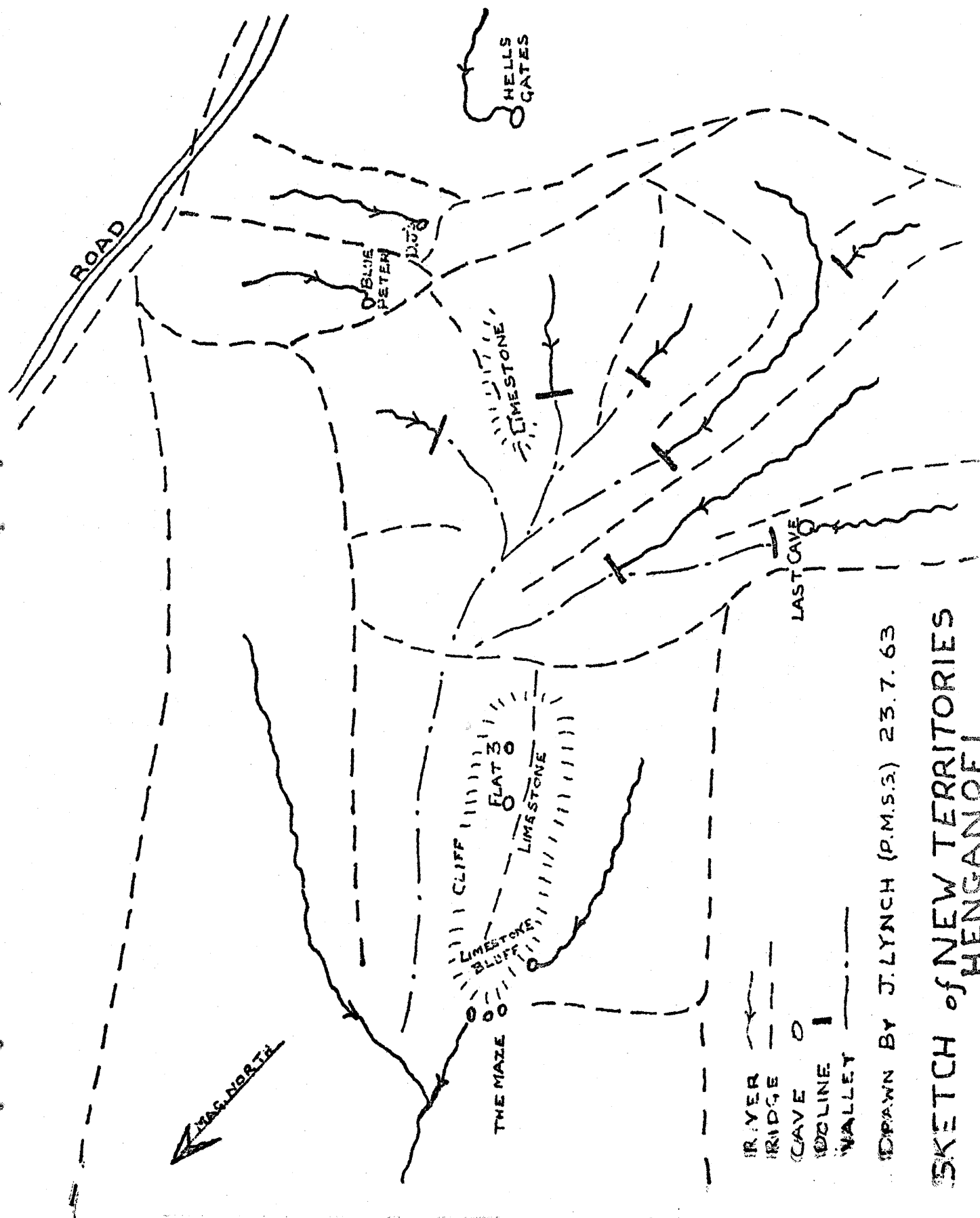
The mouths of these four caves are all within a 20 m radius of the actual outlet and it was apparent that all are interconnected. By what means is not known as yet. It may be possible to go through this little system by using the waterways or the river may go under the roof and make progress impossible.

The water is at least three metres deep as test dives went to this level and no bottom was reached. The actual size of the caves inside averages 1.8 m in width and 1.8 m from the ceiling to the top of the water. Clive and I swam to a point 9 m from the entrance of one but were not overkeen to go any further as the cave turned sharply to the left and it was a little unsafe without light. The water was very cold. These four caves have the suggested title of The Maze.

The next part of this report will not be terribly accurate as to exact locations of caves, potholes and dolines because no provision for notes was brought along and also there was so much of interest seen.

After finishing with The Maze we decided that our route back to Hells Gates should take us roughly over the top of the limestone ridge. This track up this

* Present address unknown.



way was very vague and obviously used very little. After walking for a good 15 minutes, the track skirted the edge of the limestone outcrops and moved off to the right away from the ridge we wanted to examine. At this point the guides were very definite that we should not leave the track. They assured us that no caves were on top but we decided to look anyway.

This ridge is wholly limestone with very long grass growing on the top and sides. The stone protrudes out from the grass everywhere. There is no track of any description and the going was difficult and rough. On the top a small depression with a few bushes in it was sighted and when examined revealed a deep pothole which went down for 15 m. The entrance is only 60 cm x 30 cm but inside it opens out to approximately 90 cm x 90 cm. One can climb safely down for 6 m but the next 9 m will require ladders. We were without any so we couldn't go any further but a small passage can be seen leading off at the bottom. Suggested name for this pothole is Flat 3.

About 20 m away another pothole was discovered, this one being about 1.8 m x 1.8 m at the entrance and going down for a good 18 m, a few degrees off the vertical. It is possible to get down but again we had no equipment so no exploration resulted. Again a passage could be seen leading off at the bottom. I should stress the need for extreme care when walking across this ridge as the long grass could easily conceal completely a vertical pothole. There is a good chance of other holes on this ridge but we didn't look for any as the villagers seemed very anxious to have us leave.

When we left the ridge and returned to the track we travelled for about 20 minutes up toward the main ridge (the starting point) and came across a doline with a large opening to a cave. It was rectangular in shape with two possible belay points. One would have given a ladder drop of 23 m sheer and the other, 15 m sheer. A cave which is formed in a large fissure goes off at the bottom. A small stream flows into this cave and it looks very promising. The dimensions of the opening are approximately 6 m x 3 m. (This cave is marked on the map as Last Cave. Ed.)

On the way back to the drainage ridge and Hells Gates we sighted six definite dolines and three probable dolines.

* * *

USE OF MIST NETS

By notice in the Government Gazette of 30th January 1975, the Minister for Agriculture has prohibited the use of mist nets for the taking of birds and bats in Papua New Guinea without the prior permission in writing of the Conservator of Fauna. At a later date, the import of mist nets will be restricted under the Customs Regulation.

Application forms for obtaining permission to use mist nets for trapping birds or bats may be applied for from the Chief Wildlife Officer, D.A.S.F., P.O. Box 2417, Konedobu, P.N.G.

* * *

SOME CAVES AND ROCK SHELTERS IN THE KAINANTU AREA OF THE EASTERN HIGHLANDS

F. Parker *

The following descriptions of caves result from a patrol into the Tairora and parts of the Iturua and Dogara Census Divisions during August-September and a trip to the Sonofi, Ramu Gorge and Karanka areas on 2nd to 4th October, 1964.

MUSABE AREA

Locality. South and southeast of Musabe village which is north of the Kainantu-Okapa road and about 5 km east and 1.5 km north of Sonofi rest house (see maps 1 and 2).

Access. About 1.5 km past Sonofi rest house on the way to Okapa, there is a fork to the right which follows the creek upstream for about 100 m. A clear walking track continues on for about 5 km to Musabe village, past Sonofi No. 2.

Description. There are a number of small river caves on the western slopes of a creek valley. The three visited had small active streams and were of little interest in the way of formation or length. The first is about ten minutes' walk west of the main Musabe village and commences with a small creek emerging from a sump under the north wall near the entrance. The creek continues for 15-18 m where there is a swim necessary for the next 30 m or so past a collapse then on to where the creek emerges from the cave. The other two caves are small creeks draining into the main one, and each becomes impassable after the first few metres. I believe that the people are concealing dry caves which have been used as refuges in times of fighting and evading patrols.

Relation to Villagers. The caves seen were of little importance to the people who showed them to us. However I have good reason to believe that dry caves which they used for temporary dwelling places in past times were concealed from us. No legends were offered regarding the caves seen.

History. None of the caves seen have been used as refuges but one of the caves not seen was used as a refuge for the whole village during I. Skinner's patrol described under Sonofi area. Prior to that it had often been used during fights as a hiding place.

SONOFI AREA. TAFORAHABI CAVE

Locality. Near Sonofi village and rest house, about half way between Kainantu and Okapa on the present Okapa road, in the Kamano Census Division (see maps 1 and 2).

Access. The actual cave opening is about 150 m north of the road up a small stream which crosses the road 500 m on the Kainantu side of the rest house. It is not visible from the road but the forested face of the steep limestone ridge can be seen.

* Wildlife Section, D.A.S.F., P.O. Box 2417, Konedobu, P.N.G.

Description. This is a river cave about 180 m long, formed by a small permanent creek wearing a passage through a limestone ridge, roughly at right angles to the axis of the ridge. There are no side passages but there are a few ledges on each side at various levels. Apart from these ledges, the creek runs on the cave floor all the way, and in the dry season it is possible to walk through the cave without entering the water. The passage varies from 2 to 9 m high and from 3 to 14 m wide. There are many openings in the roof and a collapse, all of which lead to the outside. The cave is formed in hard, bluish metamorphosed limestone.

Relation to Villagers. The cave is very well known and there seem to be no metaphysical properties attached to it. The men walk through it readily for the fun of it and occasionally to catch small bats and swiftlets. The native name for the cave which was offered on this occasion is Taforahabi. It is regarded as a good shelter in time of fighting.

History. A ledge about 15 m inside the mouth, about 6 m above the creek bed and on the west side of the cave shows signs of habitation to some depth. The ledge measures about 7.5 m by 4.5 m and by virtue of its position is very easy to defend. It has undoubtedly been used as the living place when the cave has been used as a refuge during fights. In 1947 A.D.O. I. Skinner chased a large group from Sonofi No. 1 village into the cave after they had killed a policeman named Baru. Not knowing that there were numerous exits he guarded the cave mouth for more than three weeks believing the people to be trapped. Since then the cave has been visited many times by people from Kainantu and Okapa. There are a few charcoal and ochre paintings in hollows in the stone immediately to the east of the opening. The upstream opening presents no signs of habitation.

Natural History. Because the cave is so short and has the creek running through it and two entrances, there is a certain amount of life in the cave. There are odd small bats (none collected) and nesting swiftlets. Water frogs were heard calling in the cave. Insects are common inside. The village people report a type of mammal living in the cave and claw marks were seen at the mouths of small holes in the wall. (See Wilde (1974) on other caves at Sonofi. Brass (1964 p. 127) mentions a big cave near the road at Sonofi and other caves in the neighbourhood.

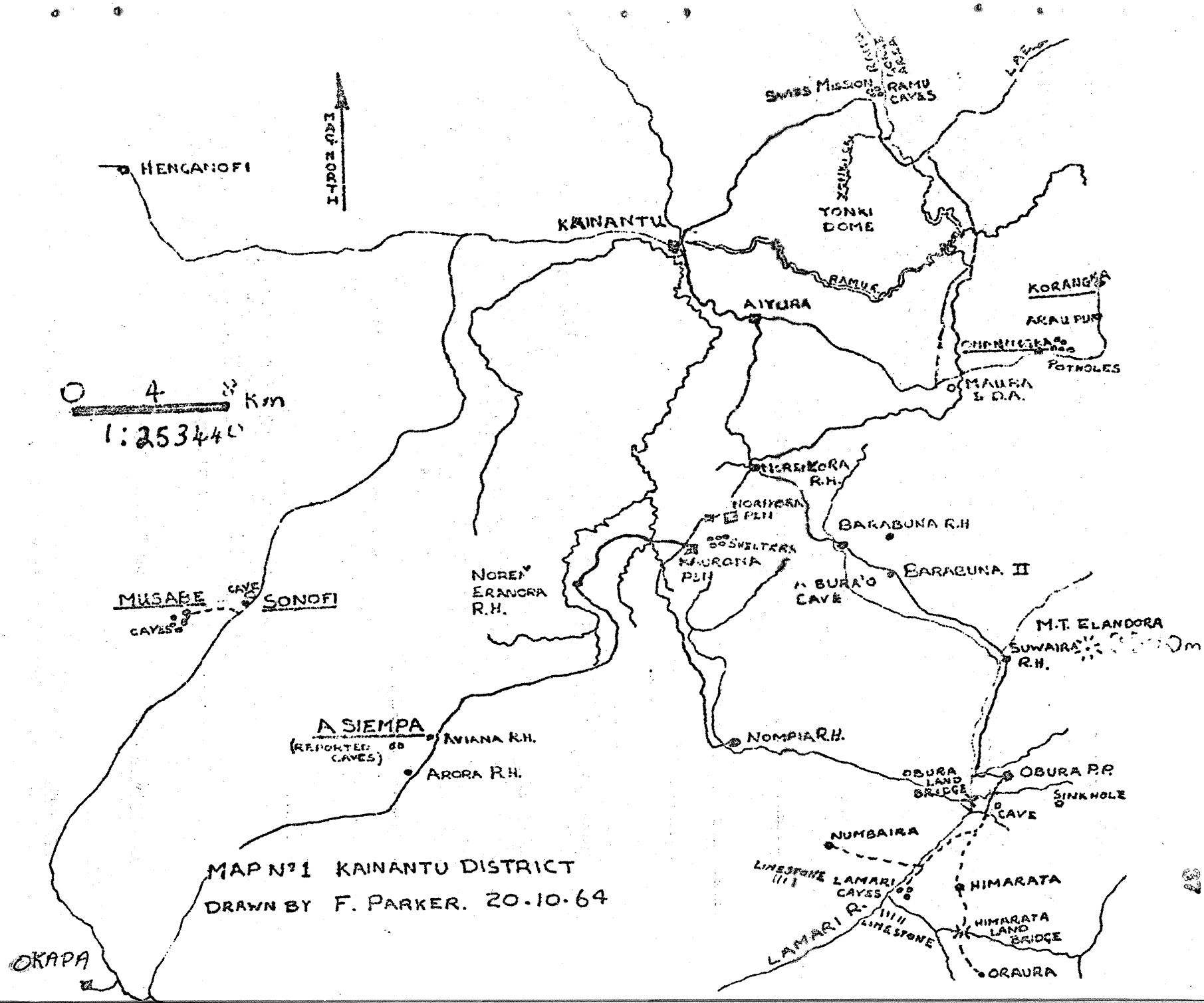
ASIEMPA AREA

Caves are reported from the Asiempa area. The locality is believed to be near Asiempa village on the Norei'eranda-Okapa road near Aviana or Arora rest house, 30 km south and 3 km west of Kainantu.

NOREIKORA AREA

Locality. In a small limestone outcrop on a ridge between Kaurona plantation and Norikori plantation (see map 1).

Access. By the Obura road and Bonta Loop Road to Norikori plantation, from which the outcrop can be seen. The ridge is about 20 minutes' walk south of the plantation.



Description. Small niches and ledges among the lumps of stone used by the people as burial areas. The largest is on the left side of the track up from the plantation and is the first large piece of stone encountered on the way up. This one is used for burials at present.

Relation to Villagers. The men are not very willing to show visitors to the area because of its current use for burial and resulting spirit occurrence. They will try to divert you from currently used hollows and show you to a couple of useless shelters on the top of the ridge. There is probably much mythology associated with the area but the people are not prepared to discuss this matter much.

History. Not known - has very rarely if ever been visited by Europeans before this year. It has been used for burials for at least three generations.

Natural History. Nil - the stones are in kunai covered ground with a few taller shrubs around the large stones.

BARABUNA AREA. AIBURA CAVE

Locality. On the Kainantu-Obura road, about 2.5 km south east of Barabuna Rest House (see map 1).

Access. From Barabuna No. 2, which is about 3 km by road south of Barabuna Rest House, there is a small track leading westwards along a ridge then down to the cave. The distance can be covered in about half an hour.

Description. A small 30 m cave through a small outcrop of limestone which projects through the surrounding creek flats. The cave has three entrances plus a hole in the roof, and three small side passages which are silted up and lead nowhere. The cave has a roughly horizontal floor and varies from 1.5 to 4.5 m in height, and a similar variation in width.

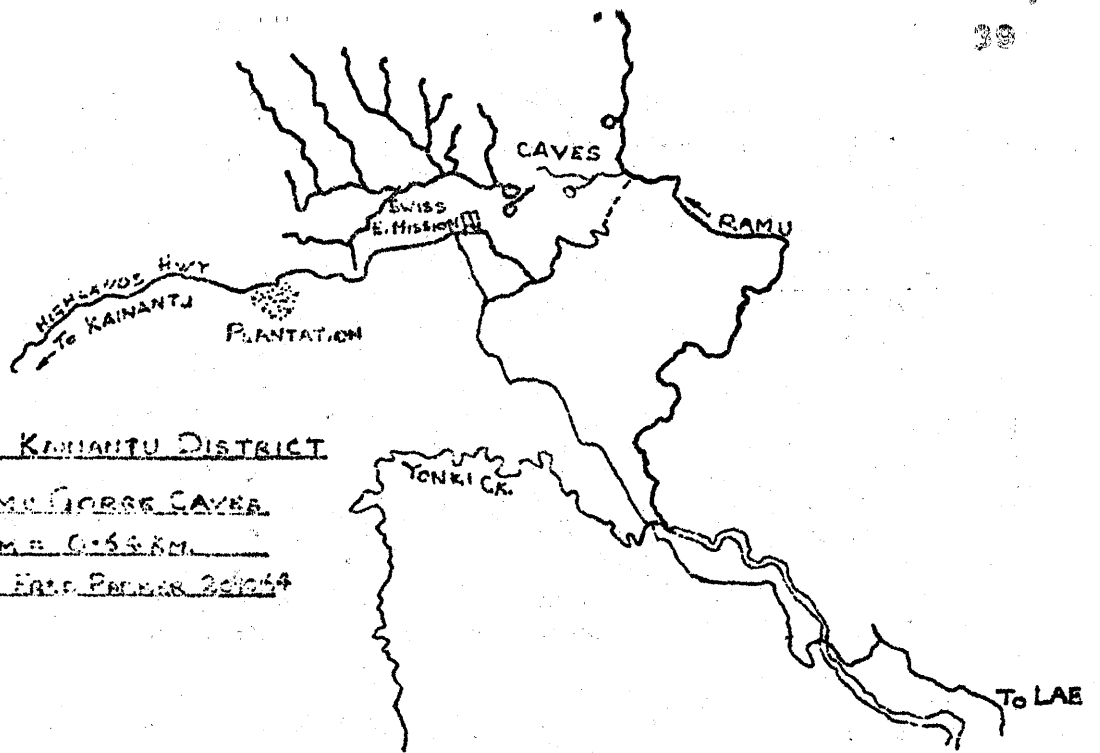
Villagers' attitude. A village existed near the cave until recently and the cave is well known to the people. They are quite willing to show the cave to people. There seem to be no supernatural associations with the cave. The cave is known as Aibura.

History. Until the village was moved from near the cave to the present site of Barabuna soon after the first patrols stopped fighting, the cave was used as a refuge in time of fighting. It was probably first visited by a European in 1961 by Alex Vincent of S.I.L. and seen again in 1963 by Virginia Watson, wife of Prof. J. Watson. (See article by Wilde on Aibura this issue and papers by J. P. White.)

Natural History. There are swiftlets living and nesting in the cave.

OBURA AREA

Locality. There is a sinkhole south east of Obura and a cave opening about 1.5 km south of Obura patrol post (see map 1).

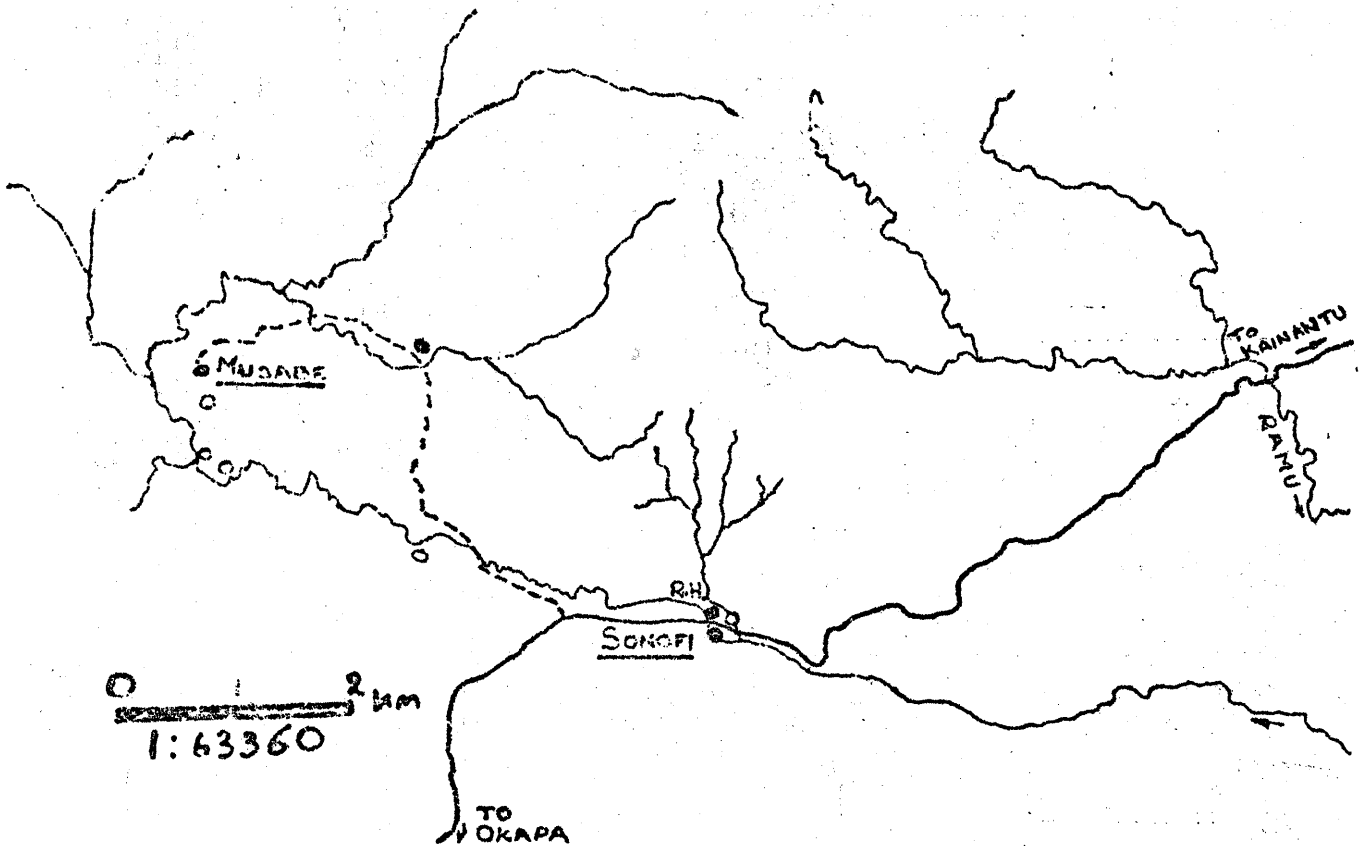


MAP N°3 KAINANTU DISTRICT

NOOKS RAMU GORGE CAVES

SCALE 1 cm = 0.64 KM.

DRAWN BY FRED PARKER 20/10/74



MAP N°2 KAINANTU DISTRICT MUSABE AND SONOFI CAVES

SCALE 1 cm = 0.64 KM. DRAWN BY: FRED PARKER 20.10.74

Access. By road from Kainantu to Obura Post. A walking track to the south east reaches the sinkhole, while the road continues on south. This passes the small cave opening.

Description. The sinkhole was not seen but is reported to be over 30 m deep, possibly 60 m. This enters the slopes of a limestone ridge about 6 km south east of the post. There are ledges on the sides and during rain some water enters. About 1.5 km to the west there is a small emerging spring which is supposed to come from below the sinkhole. The spring emerges from a jumble of broken stone, behind which there is reported to be a passage which continues all the way to the bottom of the sinkhole. The spring is at the foot of the limestone ridge into which the sinkhole drops. The Lamari River land bridge described under Lamari caves (see below) is still further west, where this belt of limestone is cut by the Lamari River. The spring opening was not investigated because of lack of time. It looks as if there is a passage with a few squeezes through the stone at the mouth; after that the passage may do anything.

History. In 1963 three Chimbos were killed near Obura and the bodies thrown down the sinkhole. Police made many attempts to retrieve the bodies but due to the depth of the hole, equipment was inadequate. Eventually a Buka policeman, Larius, was lowered on a rope and collected one body which was caught on a ledge about 30 m down. Below this the hole appeared to continue indefinitely. The resultant trial for murder was interrupted when a Chimbu killed one of the Obura men on trial on the main street of Kainantu. It is not safe to take a Chimbu (i.e., a native from anywhere west of Henganofi) into the Obura area. Groups intending to visit the area please note. Even if the native taken comes to no harm, the visiting group will get no co-operation from the Obura people if a Chimbu accompanies them.

LAMARI RIVER AREA

Locality. The Obura land bridge is over the Lamari River about 3 km south west of Obura Post. There is another land bridge across the Lamari tributary on the walking track between Himarata and Oraura villages. There are two caves and some burial holes on the left bank of the Lamari about 3 km west of Himarata village (see map 1).

Access. From Obura Post, the Obura land bridge can be reached within an hour's walking by cutting across country down to the river then following it downstream. The Lamari caves can be reached by walking to about half way between Obura and Himarata - about an hour from Obura - then cutting down to the river and following it downstream. There is a total of about 3 hours' walk involved. The Himarata land bridge is on the patrol walking track between Himarata and Oraura, but distance is not known as the writer did not visit this.

Descriptions:

The Obura Land Bridge. This is the end of a steep limestone ridge which projects across the river. The river runs under the end of the stone in a large curve, totalling about 460 m in length. The river course can be followed under

the stone if there is no flooding. The stone comes down from the east side and in the eastern wall some fissures cut into the stone for varying distances but these contain nothing in the way of caves. Bats and swallows were present in these fissures but no specimens were taken. On the right bank of the river immediately below the bridge there is a limestone face with a hollow above a ledge some 3 m above ground level. This contains paintings. The shelters under the face contain no traces of former inhabitation, since the floors are covered by floodwaters quite often.

Lamari caves (Ikenar and Kibuari). The two caves beside the Lamari River are the one system, meeting about 400 m in. The lower cave is in a limestone face about 15 m above the river level, on the left bank. There is a large entrance concealed from the river by a large mango tree and some scrub. The entrance is about 9 m wide by about 4.5 m high, and this large cavern proceeds at right angles to the river direction for about 90 m to a collapse area about 30 m across. This is below a pothole, and water drains in from a hollow above which is about 12 m above the cave floor. This area is inhabited by many swiftlets. The cave then continues in the same direction as a silted up small passage, including two 23 cm horizontal squeezes, for at least another 140 m. The cave then slowly opens up and is a large 6m x 6 m passage for about 550 m when a very extensive collapse area 90 m x 45 m wide is encountered, with mud, water and stones falling constantly from a height of over 36 m from the top cave. Precarious climbing over slimy boulders and large blocks of stone leads one to another 400 m of cave which is level and easy going and quite large. Then one encounters a large chamber 60 m long in which a medium sized bat congregates at certain times of the year. There are many traces of villagers venturing in this this far for bats, via the top cave. After this chamber the cave becomes smaller and continues on for 275 m. Then the roof meets the floor quite abruptly, and there is a small sump which was impassable. A temporary creek runs through this whole cave during rains. This bottom cave is still young and active, and there is little formation. As far as the village people are concerned the lower entrance is not passable.

The upper cave has an entrance in a cliff about 30 m above the lower cave and a further 180 m downstream from the other cave. A very large passage at least 12 m wide by 7.5 m high continues in for 640 m in an approximate straight line until it meets the other cave per the medium of the large collapse area already described. This cave is by far older and has extensive but not clean formation, and many small side tributary passages which are now being sealed off by formations. These side passages contain much in the way of helictites and straw stalactites, all white or transparent. The collapse area was explored twice but on the upper level there seems to be no continuation of the upper cave produced. There is however much seepage from the roof and perhaps a former pothole there has been sealed up with earth and stones. The area around the collapse features all sorts of worn side passages and muddy water filled hollows, but none of these lead anywhere. Climbing round here is dangerous because of the slippery mud and unstable stones. This upper entrance is used to gain entrance into the lower cave by the natives.

The Himarata bridge has not been seen but apparently there are paintings of some interest in nearby shelters in the stone. The course of the river cannot be followed under the bridge.

Relation to Villagers. This is most interesting, for when Messrs. Thomas and White visited the area, they were accompanied by Himarata people who gave their names for the caves and offered the information that the caves could be entered to hunt bats. The Himarata people own the top cave and enter this for bats. However when the writer visited the caves, Numbaira men accompanied the visit and gave the names of Ikenar for the lower cave and Kibuari for the upper cave. The Numbaira people own the lower cave and have a story of their ancestors being able to enter the lower cave some generations back to hunt bats. The story is quite clear - the two friendly villages have each owned a cave and formerly could enter the large bat congregation past the junction of the two passages but the lower passage is now silted up and impassable. Although in the days of mutual hunting the two villages must have realised that they were both getting animals in the one area after entering by their separate respective entrances, it is now not realised that the two caves meet. I was accompanied by the trembling old luluai of Numbaira when we first entered the lower cave. After we had negotiated the difficult silted up lower passage and reached the bat areas past the collapse, the luluai completely went to pieces when fresh pitpit torches and leaves were found on the floor. Later when the top cave was explored and its point of connection with the lower cave found, the writer returned alone along the lower passage to the mouth of Ikenar where the carriers were establishing camp at the mouth. My emergence caused them to take to the river. The lower cave, Ikenar, has an unfriendly spirit known as Sireboa according to the men of Numbaira who attached themselves to the patrol. A painting about 30 m inside the cave, on the southern wall, is supposed to be a self-portrait by Sireboa.

Both caves have earth floors and are ideal for shelters but have not apparently been much used - probably because of the above and other metaphysical beliefs associated with the area. Small hollows across the river from these caves, and to the south in the cliff faces bordering the river, are used for burials.

History. Apart from traditional burial in nearby rock fissures, there seems to be little in the way of habitation of the main caves. As said above, both have good earth floors although the lower cave is subject to flooding in times of rain. Peter White found no promising traces of habitation despite over 1.8 m depth of soil in each of the cave floors. The visit by White and Thomas early in 1964 was the first to the caves by Europeans. Neither was penetrated to any extent on this visit. The history of the two land bridges is not known. The Obura bridge had not been visited by a European before.

Natural History. Bats near the Obura land bridge have been mentioned and small bats and swiftlets live in the mouths of both the Lamari caves. Some bats were collected. Deep inside the Lamari caves there is a large chamber in which a medium-large species of bat, probably a fruit bat, lives in numbers at times depending probably on their annual migration routes chasing their food plants. Insectivorous bats are generally fairly permanent dwellers in caves; fruit bats migrate to find food so are present in a given area at regular intervals. Only about a dozen of these large bats were present in the chamber and none were caught. Nothing is known of any hollows near the Himarata bridge where there could be animals.

KORANGKA AREA

Caves are reported by Peter White near Korangka (see map 1), which is reached by the road from Kainantu through Miyura Agricultural Station, past Omaura S.D.A. Mission turnoff and on out past Arau plantation. White reports limestone outcrops and a cliff face in which there are three openings all in a vertical line, with 30 m between the top and bottom caves. These have not yet been explored, and natives report many more caves in the area. This is borne out by the caves and sinkholes found in limestone country on the road to Korangka, and about 6 km from Korangka, in the Onaningka area. There appears to be an extensive limestone region worth investigation in this area.

ONANINGKA AREA

Locality. On the road to Korangka described above, about 1.5 km past Onaningka village to the north of and adjacent to the road (see map 1).

Description. The area to the north of the road 1.5 km past the village is a plateau with numerous dolines, of which three have sinkholes. None was easily explorable, but one which was entered soon became too narrow to negotiate. In a small creek about 800 m to the east the collected water from these dolines comes up from a sump but there is no means of access into the caves below and linking the dolines. About 3 km past the village and ten minutes' walk down into the valley to the north and along a small tributary creek on the other side of the main creek, there is the emergent point of a small creek from a cave. The cave was entered and is negotiable through water for some 270 m before a collapse seals it off. A perennial stream runs the length of the cave. There is no formation at all. The cave is in the process of erosion by water.

History. Nothing known, although the villagers claim that they hid in the river cave during fighting times. However there is no floor to the cave and the whole is subject to frequent inundation. This was the first European visit to these caves.

Natural History. Crabs and other water life were seen in the creek, but they were obviously washed in with the water and are not natural inhabitants of the cave. Pinkish leeches with white speckling dorsally and about 3 cm long were seen on the cave walls.

UPPER RAMU GORGE AREA

Locality. North east of the Swiss Mission station, about 16 km by road north east of Kainantu (see maps 1 and 3).

Access. The two entrances to the main cave are about five minutes' walk from the Swiss Evangelical Mission. The lower exit from the river cave can be reached by passing the mission station and less than 800 m further on there is a dirt track to the left, a C.D.W. track leading to marked sites for the Upper Ramu Hydroelectric power station. This track climbs a ridge then drops half way down to the Ramu. The first creek seen to the west is that emerging from the river cave, while another small cave is about 1200 m downstream on the left bank of the river. Vertical limestone cliffs on the right bank were investi-

gated but no caves were found.

Description. As can be seen from map 3, one cave (No. 1) drains a number of small creeks, and this cave was followed in for about 90 m in which there was a drop of at least 30 m. A large permanent creek pours into this cave and emerges presumably on the other side of the ridge and about 90 m lower down. The emergent cave (No. 2) mentioned under Access above has been visited previously by Peter White who says a large creek emerges from it. With equipment the cave can be followed to the edge of a 18 m drop into a deep pool. There is a fault line followed - much cutting action has resulted in the cave being up to 3-4 m wide and up to 15 m high in places. A small dry entrance (No. 3) about 450 m to the south was followed by myself on a previous visit for only 30 m without equipment and a drop of 6 m stopped that trip. Also a passage in the west wall not far from the entrance was followed for 30 m to where it dropped suddenly into the main river cave. Undoubtedly this second entrance connects up with the active cave, probably below the drop which stopped exploration of the river, but it could join the river cave at a high point not noticed while the river cave was being negotiated.

The emergent cave (No. 4) on the Ramu slopes was not investigated for lack of time. A small cave (No. 5) from which emerged a small stream was investigated 1200 m down the river and almost at river level, and led in through a number of watery squeezes for about 18 m to an impassable sump. A high vertical limestone cliff on the east side of the river had no real caves although there appeared to be cave mouths at two points. Crossing the river itself was a major job, and should not be tried in time of flood.

History. The first European to report on the caves was Mike Wainwright (see article this issue). Apart from that exploration, I do not know of any other European visits to these caves. There are no sheltered sites where habitation is possible, either in any of the caves seen or in any of the cliffs investigated.

Natural History. In the water cave near the mission, a frog of unknown species was taken deep in the cave by Miss Whiting. The frog is a Hyliid - a tree frog - but as it is a juvenile it is difficult to diagnose its species. It is probably recently metamorphosed from a tadpole washed into the cave with the creek water. In some of the pools of water, small Hydra were seen. Due to the steep walls of the cave and the high flood level, there was no other life seen. Bats were seen in the water cave, at the drop so it seemed that the exit could not be too far away. None were collected. In the small cave near the river itself two species of frog were collected a few yards inside the mouth - Rana grisea, a terrestrial river frog, and Nyctimystes sp., a tree frog. A number of bats were also collected in this same small cave.

YONKI DOME AREA

Villagers report caves along the ridge from the Swiss Mission above towards Yonki Dome - near the villages of Isontenu, Yauna and Sosoentenu. These are said to be small niches etc., used for burials, and there may well be shelters as well (see map 1).

REFERENCES. See bibliography.

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AIBURA CAVE IN THE EASTERN HIGHLANDS DISTRICT

Kevan A. Wilde *

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This article forms part of a longer paper on the art at Aibura entitled "Notes on the Rock Art of Aibura Cave, Kainantu, Eastern Highlands District of Papua New Guinea". The paper was presented at the 11th Biennial Conference of the A.S.F., and will appear in the Proceedings of that conference.

.....

Location and Topography. Aibura cave is situated 19 km south southwest of Kainantu, as the crow flies, and 35 km by way of the Obura road. It is a short walk from Karata, an extension of Barapuna village in the Kainantu Sub-district of the E.H.D. It is about 1600 m a.s.l. and is located in a small swampy valley which drains into Kondanauta Creek, a small tributary of the Lamari River.

The area surrounding the isolated limestone block in which the cave is contained is undulating. Trees are almost completely absent from the area. "Pit-pit" grass is the only pronounced vegetation. The area is swampy with the exception of a small section of drained and cultivated land east of the limestone outcrop where shrub regrowth and induced grassland are prevalent.

History. Human habitation and use are immediately obvious on entering the cave by the abundance of charcoal drawings and white clay paintings that appear throughout. It has been ascertained by artifactual evidence (White, 1972) that Aibura was first used some 4000 years ago. Then followed a period of 2000 years abandonment or infrequent use. A second phase of extensive use commenced about 1000 years ago. A wide variety of artifacts discovered by White supports his proposal. Postholes indicate that some form of structure, a shelter or dwelling, was erected inside the cave during this second phase. (White, 1972).

It was probably first visited by Europeans in 1945. In 1961 it was noted as a possible archaeological site (White, 1972). White visited Aibura and carried out archaeological research during 1964-65. (White 1965a, 1967a, 1967b, 1972. White and White, 1964). The cave is apparently regularly visited by Europeans and the location is consequently quite well known.

Description. The cave is quite small and measures 60 x 25 x 15 m (see survey). It has four negotiable entrances converging on the main chamber (10 x 15 m) which is dimly lit by a number of holes in the roof. With the exception of the north west passage, the walls and roof are heavily smoke stained and blackened above 90 cm - presumably due to fire lighting during occupation. The roof varies in height from two to four metres. Apart from some deposition in the main and western chambers, the cave appears to be "dead". Normally it is damp but not wet. White (1972) records floor wash occurring during the wet season. Some algae are apparent in places on the walls which are normally quite dry. Drawings and paintings are protected and are located behind the "drop line". On the western side of the outcrop a small alcove-like cave is located.

Local Mythology. One Taka-Kaino, an elder of Karata, related the following legend.

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"About three generations ago, seven children of Barapuna village came to Aibura cave to play. Whilst they were playing an elder from the village came down and told them to stop playing in the cave because it was dangerous. The cave was then heard to say the following (dialect), 'Bitori mau ori pempu urau bairbain.' (Roughly translated, this means 'I am going to close.') With that, all entrances of the cave sealed themselves, and the walls began to close in, trapping the children inside. The parents of the children came to the cave when they heard what had happened, and brought freshly killed pigs and cooked vegetables in an offering, and begged the cave to release their children. The cave remained closed and occasionally the children could be heard crying and shouting for help, until finally only one child remained. Later he too died, and the crying stopped. Some weeks later the cave opened up again. The parents went inside and recovered the bodies of their children. They were carried back to the village where there was great sadness and mourning."

Taka also related that the cave was used, in the time of "tumbuna" (ancestors) and during his lifetime, by the women of the village during the act of childbirth. This was corroborated by other informants who also said that the alcove on the western side was used for this purpose. It was also said that the cave was used as a place of refuge during tribal warfare against the once traditional enemies, the Tsaiora. Local people account for the blackening of the roof and walls with the story that the Tsaiora once set fire to the grasses that grow over the outcrop. Taka said that the cave was occupied at the time, and that all the possessions of the occupants were destroyed in the ensuing fire.

Cave Art. The cave is well decorated with paintings. (For a full description see A.S.F. Conference paper.)

Conservation. As with many of the other parietal art sites throughout the highlands, Aibura has been vandalized by local youths. It is obvious that sites lacking in 'tambus' are abused by village children and in some cases by Europeans too. Perhaps schools could be made aware of the catastrophic destruction of this aspect of local culture? Students should be made aware of this tragedy and be educated towards preserving these unique, valuable and beautiful assets of their cultural heritage.

REFERENCES. See bibliography.

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MEMBERSHIP OF THE AUSTRALIAN SPELEOLOGICAL FEDERATION

The P.N.G. Cave Exploration Group has been accepted as an associate member of the Australian Speleological Federation. A subscription of \$5 has to be paid annually and the Group is entitled to receive publications of the Federation.

Because we are not full members, everyone does not receive the Federation's publications.

* * *

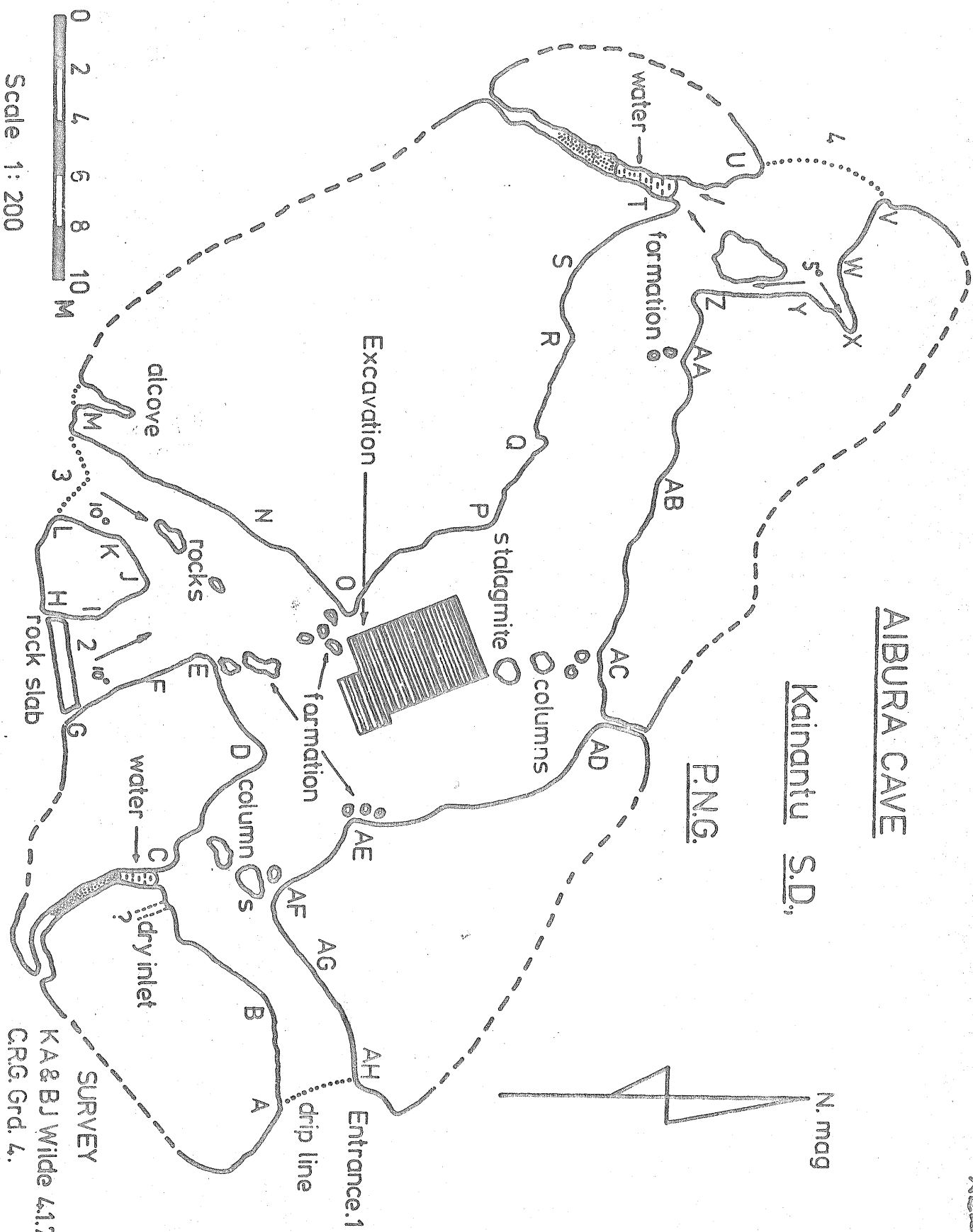
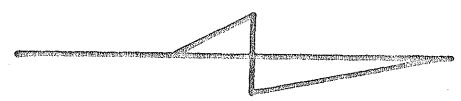
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AIBURA CAVE

Kainantu S.D.,

P.N.G.

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THREE CAVES IN THE YONKI AREA, EASTERN HIGHLANDS DISTRICT

Mike Wainwright *

About 16 km on the Kassam side of Kainantu is a Swiss Evangelical Mission. Roughly a kilometre to the north is a valley in metamorphosed limestone which runs approximately east-west. The valley contains a number of sink holes with an active stream cutting back up the valley to the west, that is, leaving behind the earlier points of entry of the stream into the ground.

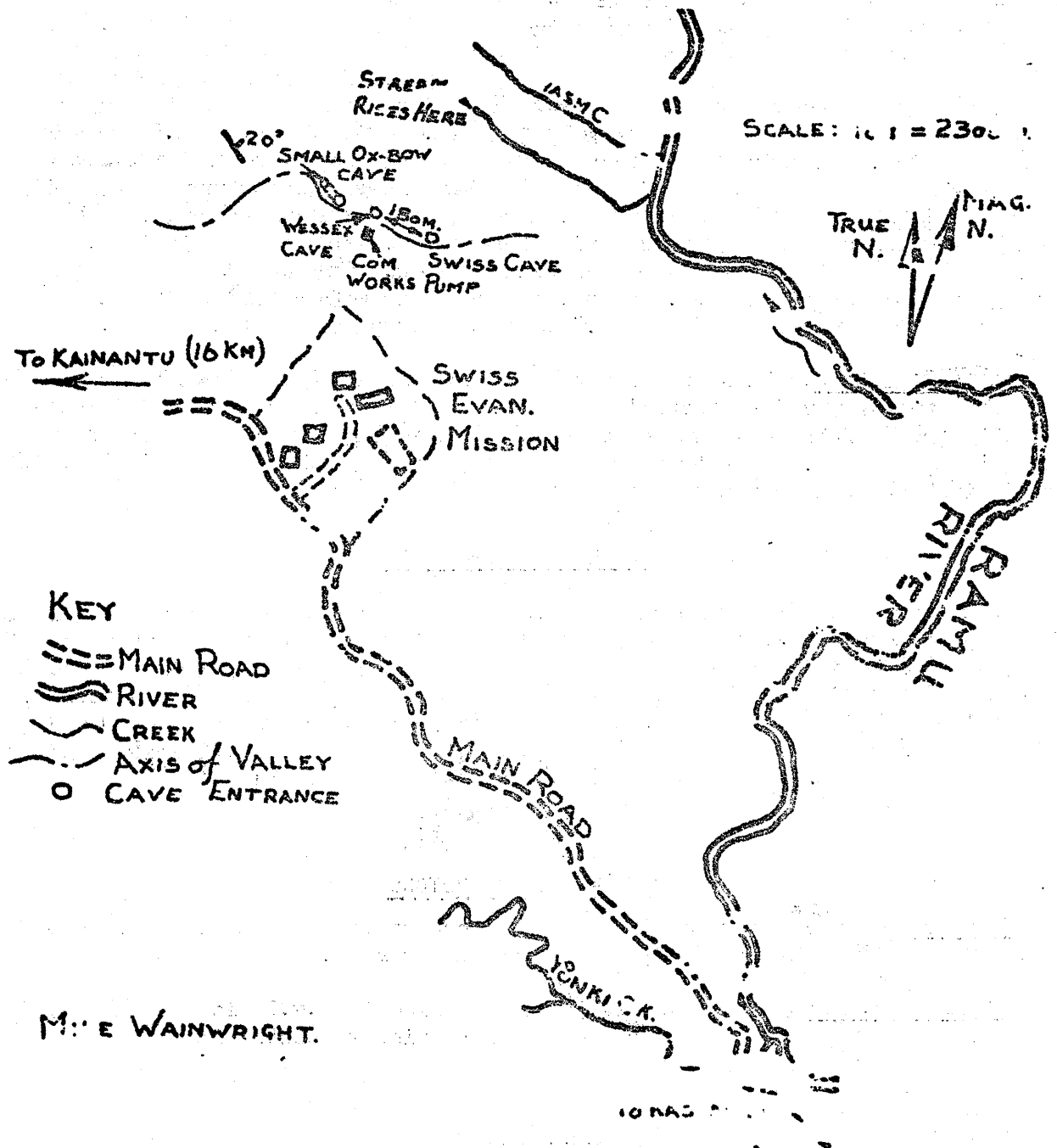
There are two major caves, the first of which is now taking the stream-flow, and is located in a predominant tree-lined depression immediately north of the mission ("Wessex cave"). The second and presumably older cave, "Swiss cave", lies about 200-250 m down the valley in a similar patch of trees. There is a small ox-bow cave system some 75 m up the valley through which the stream also flows (see map). I visited the caves briefly on two occasions in August, 1964.

Wessex cave. The entrance is large. Com. Works have partially blocked the stream that flows into the cave, and have a large pump installed a metre or so above it. The best entry is down the left hand opening which drops about six metres down an inclined passageway to meet the streamway. This flows off to the left, leading to a series of gours, potholes and inclined water scoured passageways. These lead to a rift chamber down which a bit of rock climbing is needed to bypass a beautifully eroded pothole on the left. Following the streamway along the rift, a pool has to be crossed by a short swim. The way on leads off the right down an inclined passageway. This soon gives way to another beautifully etched pothole for which a 6 m rope would be needed on the return trip. Beyond this the stream follows the rift into a large chamber at the end of which the stream drops through the floor into a 12-15 m pitch. This was not descended.

This end chamber is very impressive and like other sections of the cave is cut by dolerite dykes ranging from 2 cm or so to a metre in thickness. The dykes are discordant with the bedding of the limestone, and the gradation towards them of the limestone becoming marble is interesting. There is also discolouration towards the intrusive margins of the limestone. There are not many stalactites and not much evidence of alternate routes. I saw no bats, but there are small amounts of guano. The total length explored to the pitch was about 120 m. The stream disappears to the right at the base of the pitch and appears to follow another rift. The stream is said to reappear on the other side of the hill and to flow as a surface creek to the Ramu River. This being so, there could well be 600 m or more of passage. The system descends fairly steeply, but no depth estimate was made. Parts may be subject to flooding. I gained the impression the cave follows a generally north-south trend. I have named the cave "Wessex" after the large English caving club.

Swiss cave. This one is dry but it may well become active during heavy rains. The entrance is very impressive. At one time the stream must have flowed down a 12-15 m aven, now only partly remaining. Near the base of the

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aven the large entrance leads into a boulder chamber, and the main streamway descends into a lofty rift on the right. This contains some very fine formations. The rift chamber is very large. In parts the formations are covered in a thick deposit of guano. There were some bats present when visited. To follow the streamway it is necessary to climb down to the bed. This leads on to a dolerite dyke which cuts a large oval chamber. The streamway comes out half way up the chamber, and again there appears to be no alternative but to have 10-12 m of ladder to descend into the base. This stopped my progress in that direction. Climbing back from the floor of the stream bed, I noticed a small ox-bow passage on the left hand side which reappears further up the rift. I did not investigate this thoroughly. Back at the entrance chamber, there is a small muddy passageway with some fine formations, including helictites. The passage leads off to the left up an inclined plane. This shortly drops away into another large rift plane. Either of these two main rifts might easily connect up with the "Wessex" system. "Swiss" cave may be a suitable name.

Editorial Note. "Wessex cave" appears to correspond to Parker's cave No. 1 and "Swiss cave" to Parker's cave No. 2. Parker has not reported Wainwright's small ox-bow cave up the valley, and Wainwright does not mention Parker's 3, 4 and 5. Thus there are at least six caves in the area if "Wessex" and "Swiss" are considered separate caves.

* * *

HIGHLAND CAVING MEET

There are about 30 cavers in P.N.G. How many have you ever met? The isolation of cavers in P.N.G. has prompted me to see if anyone would be interested in having a meet in the highlands for a few days over Christmas, possibly at Kundiawa. We could have a day of talks and slides and getting to know our fellow cavers, followed by a day or two caving. If you are interested or are prepared to help out with accommodation or organizing a trip, please drop me a line. All suggestions, clean ones, welcome. Jim Farnworth, P.O. Box 163, Rabaul.

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THE NEW CONTRIBUTORS

Jim Lynch was a member of the Goroka branch of the PMSS in the early sixties and did some caving in the highlands during this period.

Mike Wainwright was a B.M.R. geologist working in P.N.G. in the early sixties. He did some caving in the highlands before returning to Australia.

* * *

PNGCEG BADGE

Several years ago Bev Wilde designed and produced a badge for the Papua New Guinea Cave Exploration Group proposed by Kev Wilde and Van Watson. The Wildes have produced a number of the badges which can be obtained from Bev at P.O. Box 1055, Goroka, or the editor. The badge features stylized mountains and a cave. It is done in black on red and is quite handsome.

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As always I would greatly appreciate any omissions to the list.

- * Papers marked thus would be of greater interest to most cavers.

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AUSTRALIAN SPELEO ABSTRACTS

Perhaps you aren't interested in reading about karst in N.G., or carabid beetles, or bat parasites, or bat auditory mechanisms, or archaeology, or fauna from Kafiavana, or geology of the Kubor anticline, or pseudokarst from Cape Hoskins. It is also conceivable that you aren't interested in chasing up an article on archaeological excavations in the Eastern Highlands, or one on karst variation with altitude, or geology of the Saruwaged Range, or cave art from the Trobriands. But perhaps you are. Or perhaps you are interested in an account of the Muller Range expedition, or the importance of communications in a cave rescue, or an article on carbide lamps, or cave conservation, or cave safety.

The place to obtain the reference for the article that interests you is Australian Speleo Abstracts. A.S.A. is now produced annually by the Sydney Speleological Society and contains abstracts of the Australian and P.N.G. speleological literature. You certainly cannot personally obtain all of the caving literature published in Australia and P.N.G. But you can subscribe to A.S.A. and when you find an article you are interested in getting, write to the editor of Niugini Caver who receives many publications from Australia on an exchange basis. He simply forwards a copy of the article to you and you are able to keep up with new ideas as well as anyone who belongs to a more regular caving society.

Each year of A.S.A. (one or two issues) contains over 1000 abstracts. There are six sections, viz. caves (by states), biology and anthropology, physical and earth sciences, conservation and tourism, technique and documentation, and miscellaneous (mostly humorous articles). For each article abstracted, the title, author, publication details, number of maps, photographs and diagrams are given as well as a few lines on the article.

The latest issue of A.S.A. (1973. 7th issue) is now available from 77 Woodfield Boulevard, Caringbah, N.S.W. 2229. It contains some 89 abstracts from P.N.G. covering a wide range of subjects. Back issues since the publication started in 1970 are also available, rates on request. For anyone interested in the speleological literature from Australia and P.N.G., be they a regular caver or a specialist, Australian Speleo Abstracts is good value at \$2.50.

* * *

R.M.B.

THE CAVING SCENE

Bougainville. Hal Gallasch had a look at a few dolines inland from Lonahan on Buka Island in May but none led to caves.

British Expedition. The main party arrives in June. The group coming by sea with the gear has sailed, and includes Jim Farnworth's brother. In April Howard Beck and Kevan Wilde went into Telefomin to do some reconnaissance for the main trip. The trip is going really well, according to Kevan. Firstly they had a look at a limestone massif 3500 m a.s.l. called Aiyung De Bom. Nothing there. Then they went to the Finim Tel Plateau on the Barhmen Ranges which looks very promising. They found three dolines about 180 m across and 120-150 m deep, sinks, risings, shafts and horizontal caves, none of which they had time to explore. This area seems to have 1200-1500 m depth potential.

Howard and Kevan have just returned from a patrol covering the bottom of a fault controlled valley a couple of days' walk south of Telefomin. Kev was raving about the area last letter. "Man, 20 good looking holes with entrances pitches from 20 to 70 m deep! We reckon there's about 1000 m between sinks and risings. We cut our way along the bottom of the valley and in about two hours walking time we got 20 holes! I reckon we will come up with some 50 or more going holes in the recce alone. I've never seen anything like it. Leaves the Mullers for dead, mate."

They are going into the headwaters of the Ok Agim on the Hindenburgs before going back to Finim Tel to finish off the base, cut a few more tracks and find more holes. At this stage they are doing surface exploration, cutting tracks, and building huts. Howard cut his leg rather badly with a bush knife and had a 2½ day walk out over two ranges to get 10 stitches in the leg. Kev had been getting information on cave art in the area.

Central District. In February Fred Parker took a group of people from the Uni. including John Dodd, David Holdsworth and Camilla Huxley, up to Javavere. He took a Y.H.A. party back in March when they visited Old cave. The party included Malcolm Pound and Fred's seven year old daughter Vivian. According to the Doece villagers, there are a lot of caves in the next valley over from the known caves. David Holdsworth has been taking parties up to Sogeri to look at the rock art there.

Chimbu. In March Howard Beck, Roy Blackham, Dick Knight and Kevan Wilde bottomed Bibima - only the second time that the cave has been bottomed. (See report this issue). A few weeks later Kev walked from Chuave to Lende looking at sinks on the way up, and had a look at Kirove cave. Together with Howard Beck, Linda Harrison, Dick Knight, Helen Wilson, and another couple Rex and Rona, Kev did a trip to Irapui the same weekend.

Eastern Highlands District. In March Kev Wilde got up to Hells Gates, and surveyed the cave. (See his description this issue.) Does that bloke ever work?

East New Britain. There were two trips in March. Michael Bourke, Hugh Coulter, Vic Dent, Jim Farnworth and Tim Sprod went out to the Rembarr Range looking for caves, but were given a bum steer by the guide, so the party retired to do some rope work on the limestone cliffs there. At Easter Colin Cranfield and Malcolm Pound joined Michael, Jim and Tim for a trip to a new cave beyond Gaulim. Again the guide didn't come good. The party was taken to a waterfall with a tiny overhang at the bottom instead of the promised cave! So they fell back to the Malabunga pumice caves with Nick Bozeat. Colin and Malcolm pushed cave No. 4 and got in another 30 m or so.

Manus District. Geoff Francis remains active in the antipodes. In February he visited Nge-Pelimat to collect water samples for his geomorphological studies. Peter Daniels joined him in March to go out to Loniu to collect more water and to introduce Peter to caving. Come April and Michael Bourke joined Geoff and Peter for an evening trip to Nge-Pelimat for more samples and some photographs. Geoff returned the following day to collect his water bottles. Later in the month Hal Gallasch, Julius Growin and Geoff did a trip to Loniu. They absailed into a new section and surveyed it. It was found that it is possible to get into the new section from the older section without going over the drop. Naturally Geoff got more water samples.

During May Geoff went out to Bunai and "was lucky to find the caves still there. They have bulldozed and blasted a road across the raised reef, passing within 20 m of Towan cave and 60 m of the Kohin doline. In the process, a small cave with 20 m of passage and two soil-filled entrances were exhumed and almost immediately destroyed. But I suppose there is a positive side to it. At the prevailing rate of Manus road construction, speleos will be able to drive to Bunai by 1990." He collected quite a few water samples and found that the groundwater near Kohin is brackish.

New Ireland Expedition. Plans are well advanced for the July-August trip to the Lelet Plateau. There will be 8 or 9 participants. Sponsorship has been coming along well and will cut the expenses considerably. In April Michael Bourke, Jim Farnworth and Tim Sprod had an aerial look at the plateau. The flight was very interesting apart from the fact that the plane crashed in the sea. (See report this issue.)

Western Highlands District. Hans Meier and his wife went up to Hagen over Easter and ended up doing some unexpected caving. One was a well known river cave. The other ones were about 16 km out of Hagen towards Minj. The caves were fairly small and nothing spectacular, except that there were some paintings in one of them. They consisted mainly of human figures, snakes and a mosaic. Hans heard a few stories about the caves and found the villagers very willing to show them the caves. One of the caves was used as a burial place.

* * *

R.M.B.

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PAPUA NEW GUINEA KARST TYPES. 1. TOWER KARST

R. Michael Bourke *

In Papua New Guinea there are to be found a variety of landforms developed on limestone known as karst. Karst landforms are those where solution processes are dominant. Because they are often rugged and unpopulated, there is little development near such areas and one normally only sees them from the air. Because they are so interesting, I will be publishing a series of plates on the different karst landforms to be found here, starting with tower karst.

Williams (1973) defines the karst forms to be found in P.N.G. as follows:

A. Minor solution features. He states that solution flutes (Rillenkarren) and solution tunnels (Rinnenkarren) appear to be the most common. (See the photo on the inside of the back cover from Chillagoe).

Crevise karst is another minor solution feature.

B. Doline karst. "Areas of scattered, separate, circular and sub-circular depressions occasionally occur, particularly on the floors of major depressions and along river terraces."

C. Polygonal karst. "This is the most widespread type of karst landscape in New Guinea. It is characterized by a limestone surface that is completely pitted by adjoining closed depressions, the topographic divides of which produce a crudely polygonal network. In detail polygonal karst shows many styles, but the styles merge in form; thus no strict division of types is possible. The following polygonal karst styles appear to be common:

1. An undulating surface incised by close-set depressions with gully-like channels leading to roughly central stream-sinks. (Honeycomb karst)

2. Pyramid-and-doline karst. A terrain of close-set bowl-shaped depressions with intervening, concave pyramidal residual hills.

3. Cockpit or cone karst. (Kogelkarst). A sea of rounded conical hills with intervening gullied depressions or cockpits.

4. Emia tower karst. A vigorous relief dominated by steep conical and cylindrical towers with rounded tops, but inset with intervening gullied depressions.

5. Arete-and-pinnacle karst. A spectacular terrain of almost bare, sub-vertical, saw-topped ridges, reticulate in plan. The precipitous ridges or aretes sometimes reach 120 m high and rise dramatically above deeply incised closed depressions and gullies."

Photo 1 shows tower karst in the Emia valley, south west of Poroma in the Southern Highlands. According to Williams (1972), the Emia type of tower karst is quite widespread in the highlands, and seems to occur in strike belts where

* D.A.S.F., Keravat, E.N.B., P.N.G.

bedding is thicker than usual and where local relief is greatest. It is also known from around Koroba.

Photo 2 shows the classical tower karst type, in this case a tower in Malaya. The towers rise several hundred metres out of the flat alluvial plane and are most striking. Tower karst is common from southern China through Vietnam, Cambodia, Thailand, and into the Malay Peninsula. It is known from other areas in Asia as well as in the Caribbean (Jamaica, Cuba). Caves are commonly found at the base of the towers. The classical Chinese drawings of steep hills are of tower karst.

Photos 3 and 4 are from Chillagoe in north Queensland in an arid climate. Again the towers rise out of a plane of non-limestone rocks. There is a tourist cave in the bluff or tower in Photo 3, and a car can be seen outside the cave's entrance. Photo 4 gives a close up view of another tower and the solution tunnels can be seen quite clearly. (Photos by author.)

REFERENCES

- Williams, Paul W. (1972). Morphometric Analysis of Polygonal Karst in New Guinea. Geol. Soc. Amer. Bull. 83: 761-796.
- Williams, Paul W. (1973) Variations in Karstlandforms with Altitude in New Guinea. Geograph. Zeitschrift Beihefte, Erdkundliches Wissen, 32: 25-33.

* * *

NOTE ON THE PHOTO IN THE BUSHGEAR ADVERTISEMENT

The photo shows karrenfield development (an area of limestone with solution features) from one of the bluffs at Chillagoe in north Queensland. Both rillenkarren (simple solution rills up to 3 cm deep) and rinnenkarren (natural gutters and knife edges 10 cm or greater) can be seen. Photo by R. M. Bourke

* * *

PHOTOS IN NIUGINI CAVER

The development of most of the prints used in Niugini Caver is done by Colin Madden from Keravat Senior High School. Colin can turn a print with poor contrast into a good one suitable for publication - and he often has to as the photographs are sometimes taken under unfavourable conditions. Thanks Col.

* * *

BIOLOGY AND PALEONTOLOGY SYMPOSIUM

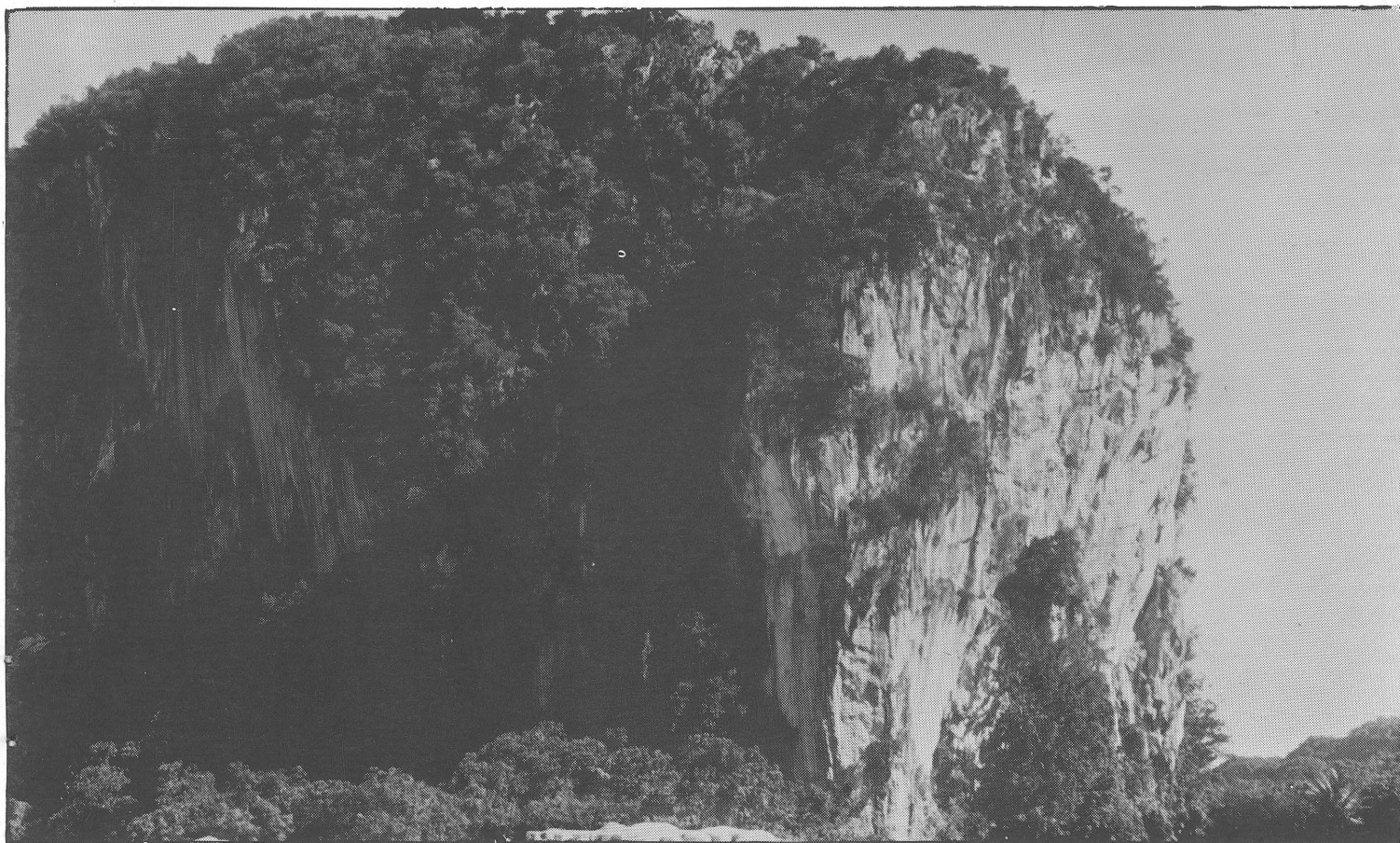
The South Africa Speleological Association has advised that an International Symposium on cave biology and paleontology will be held in South Africa in August 1975. A contact address for those interested is:

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* * *



1



2



3



4

BIBIMA - THE SECOND DESCENT

Kevan A. Wilde *

On Saturday the 8th March, 1975, Bibima was bottomed for only the second time. The descent was carried out by Roy Blackham and Howard Beck currently of Mt. Hagen; and Dick Knight and Kevan Wilde of Goroka. No one led the trip - we just went. The first descent of Bibima, the deepest hole in the southern hemisphere (-494 m or 1,620 ft), was made on the 5th and 6th August, 1972 by Van Watson, Bill Sanders, Tony Maddern and Kevan Wilde (Wilde and Watson, 1973).

We all met and overnighted at Kundiawa with an early morning start. The Mai Loop Road is now almost completely non-existent so we had to walk from the highway up to the entrance which took about two hours - porters were hired to help carry the gear up to the entrance (2,100 m a.s.l.). We rigged the first and second pitches (six and thirty nine metres respectively) with one continuous length of Bluewater III rope with two covering belays at the top of the second pitch, and commenced the descent by about 1100 hours. The remainder of the pitches, with the exception of the 'Passion Cooler' (which was rope-rigged) were rigged with the same tackle as the previous descent and we were at the bottom by 1615 hours.

The ascent took a little over six and a half hours and we were back at the top of the six metre entrance pitch by about 2300 hours; thus cutting the original time by more than nine hours (without surveying). The whole trip, in fact, could possibly be reduced to less than nine hours total. We were all impressed by the immense proportions of 'Lucifers Quarry', particularly on the way out, with the slog up the steeply sloping and collapsed floor. Howard took quite a lot of photos for his home club journal and was quite impressed by the formation in the chamber proceeding 'Jumarlube' pitch.

By the time we had de-rigged and hauled all the gear up the forty five metres of shaft to the entrance we were all a little weary and beginning to feel the chill of the cool, night air of the Porol Ranges. Our rucksacks were not to be seen, anywhere, and we later learned that they had been removed by the porters for safety - so we left the gear at the entrance and set off for the highway where we had left Dick's car. We were back in Kundiawa by 0145 hours on the Sunday morning, very tired, but agreeing that it was a good trip.

Although the trip was made in the 'wet' there was not sufficient water to cause us any concern (probably due to the small catchment area). The only problems encountered were the slipping of the sheath and abrasive wear on the new Bluewater III rope. The slipping of the sheath caused Kevan's whaletail to jam about 10 m off the bottom of the second pitch and he had to transfer over to Jumars and prussik down. Reports from England say that 'Bluewater is not all that it is cracked up to be', and they might be right.

REFERENCE

Wilde, Kevan and Watson, Van (1973). Bibima Cave, Porol Escarpment, Chimbu District. Niugini Caver 1(1): 2-6.

*. P.O. Box 1055, Goroka, P.N.G.

* * *

AN AERIAL LOOK AT THE LELET PLATEAU, NEW IRELAND

R. Michael Bourke *

In which we inspect the plateau from the air - sight a useful lake - take a number of photographs - have an unexpected swim when the plane crashes in the ocean - visit Lamerika plantation - and return to Rabaul in a rescue plane.

.....

Early on the morning of 26th April, 1975, Jim Farnworth, Tim Sprod and I flew over to the Lelet Plateau in a single engine aircraft piloted by Les Mitchell. The impression of the plateau from the air is the massive block of limestone that rises up to 1400 m from the sea. The cliffs on the south west coast are quite impressive, and are up to 500 m high. The highest part of the plateau - above 1000 m a.s.l. - is extremely rugged forest covered karst country. It looks more like honeycomb than cone karst. There is 100 m or so between the ridges and the bottom of the dolines, and crossing this country would be difficult.

We sighted one of the large dolines evident on the aerial photographs. The north east edge of the high country is dissected by large gullies and would be extremely difficult to traverse. We also sighted the hut Kevan and Jim stayed in up on the high country. It appears the area they visited was not the best for deep caves. Of course when you are on the ground in the forest, it is difficult to know where you are. The track from Dalum and Limbin would not go over the high country as marked on the map. The top of the plateau is real devil country.

The area around the villages is about 900 m a.s.l. and is more open. It is quite gentle by comparison - although I do not recall thinking that when we walked across it! We could recognize the villages we had previously visited. One important discovery was that there is a small lake in our proposed dropping zone east of Limbin. This could be a good water source provided it persists in the dry. The country is cone karst, but the cones are not particularly high and they are not continuous as are the ones in the Kikori area of Papua.

Just as we were about to leave the area for the trip back the engine started to humbug and the cockpit soon filled with smoke. After putting out a mayday call we managed to cross the island to the north east coast, losing altitude rapidly. Les tried to reach Lamerika strip, but we weren't sure where it was. In any case the engine died just before we reached the coast, and we had to put down in a hurry. Les very skilfully got us down in a bit over a metre of water about 25 m from the beach. Unfortunately the plane overturned when the front wheel hit. Les and I ended upside down under water. It took some time to free ourselves and get out. Apart from bruises, the only injuries were cuts to Jim and myself where we broke the perspex windows to get out. There were a few anxious moments while we searched for each other from the opposite side of the plane, unaware that everyone was out.

Jim got a truck to Dave Larkin's plantation, and we got a radio message to D.C.A. informing them of our safety. By this time a rescue plane had landed with police and a doctor. Dave has offered us his truck and use of his house for the coming expedition. After getting the plane ashore, we flew back to Rabaul. Aerial reconnaissance is very useful - but preferably in a twin engine plane!

* D.A.S.F., Keravat, E.N.B., P.N.G.

* * *

TENTH BIENNIAL CONFERENCE - AUSTRALIAN SPELEOLOGICAL FEDERATION

Kevan A. Wilde *

The 10th Biennial Conference of the Australian Speleological Federation was held at the University of Queensland in Brisbane between the 27th and 29th of December last year. Jean and Mike Bourke and Bev and Kevan Wilde represented P.N.G. There were some one hundred cavers gathered from all over Australia. The conference people were, in the main, housed in the Union College and a lecture theatre was provided for the papers.

Papers were quite diverse and covered a wide range of topics, but there was a large section on pseudokarst (whatever that really is). There were papers relating to geology and geomorphology with an interesting "travel guide" on "Cave and Karst Areas in Fiji, Samoa and Tonga" by John Dunkley. A guy called Les Hall gave a very interesting paper on a bone deposit at Marble Arch, N.S.W. and a second "Roost Selection of the Eastern Horseshoe Bat, Rhinolophus megaphyllus" jointly presented with Alan Young and Andy Spate. There were a number of papers on the Chillagoe caves and karst which is receiving a lot of attention as a "new" caving area. A worthy paper, "Mt. Etna Conservation - a history of arbitrariness", carrying the long fight for the protection of Mt. Etna and Limestone in Central Queensland even further, was given by Lex Brown. There were many more. Andrew Pavey showed his caving movie which was received with both enthusiasm and criticism. Anyway, he's won a grant to make a film on Kubla Khan (Tas.) on the strength of it.

Mike Bourke gave a paper entitled "Pseudokarst Caves of the Gazelle Peninsula, New Britain, P.N.G." which described a number of caves in volcanic pumice ash and theorized on their formation and development. I presented a paper on the rock art of Aibura cave in the Eastern Highlands which included some local legends and a comparison with Kundiawa sites. That about sums it up. All in all, a quite considerable contribution and we look forward to seeing the results in print. Andrew and Anne Graham, who more than capably organized the conference, are optimistic in guaranteeing the early publication of the proceedings.

The last but one evening consisted of a huge feed and gallons of grog at the "Cavemans' Dinner" held at the Union College mess. A fine meal was presented and no one left the party hungry or sober. On the last afternoon were the speleosports with a cunning duck in a lake, rubber tyre and sacking squeezes, ladder and rope pitches up the sides of buildings and a stream passage and chimney in a water drain ... charming. Well, after everyone had completed it was decided that the P.N.G. mob were pikers and that we should have a go. So Mike and I (the worse for three and a half bottles of cider), Lex Brown, Pauline McMahon and Peter Shaw commenced the course, finishing but a short time behind the leaders.

There were a number of trips after the conference to Kempsey, Chillagoe, Mt. Etna, Camooweal and New Caledonia. Mike, Jean and I went on the Mt. Etna trip and the two men continued on to Chillagoe. We visited a number of the well known caves in those areas. Prior to the conference I had been to Tassie and done a trip to Kubla Khan and Genghis Khan and a small squeezey cave at Kempsey. Kubla Khan is highly recommended for those who like a bit of sport combined with pretties. A good time was had by all and the whole thing was certainly worth the effort,

* P.O. Box 1055, Goroka, P.N.G.

SPELEO PERSONALITY - FRED PARKER

The first thing that strikes you when you meet Fred for the first time is his age - or rather lack of it. You have heard about him for ages and read his papers, so you anticipate an oldish bloke. Instead you are confronted with a fellow in his thirties with boyish looks and a big grin.

He was born in Meerut, India, in 1941. After high school Fred came to P.N.G. as a kiap. He was posted to Bougainville firstly, and then the Eastern Highlands in '63. In October that year he was transferred to what is now the Chimbu and in '68 to Daru. In late 1973 he joined D.A.S.F. Wildlife Section at Konedobu and is still with the didimen - although Fred insists that he is still a kiap. In 1960 he met Gordon Bain in Port Moresby and joined the Port Moresby Speleological Society. However he didn't start caving until early '62 when he visited caves on Buka. His reason for caving - not original - the caves are there and of course they had to be explored. He has caved wherever he has been posted. As well as on Buka and Bougainville, he has caved on the Shortland Islands in the Solomons, in a number of areas in the Eastern Highlands, in the Chimbu, in the Ok Taub caves in the Western District, in the Star Mountains, and more recently at Javavere out of Port Moresby. Fred has made two trips to the Star Mountains and Hindenburg Range. In 1970 he visited a few areas in N.S.W. He was a member of the PMSS and the Goroka Caving Club, and is a member of the Sydney Speleological Society.

In 1965 Fred wrote: "My caving is done primarily from the point of view of mapping and exploring all the caves in a given area, and preparing reports for the use of archaeologists, zoologists or cavers who may need them. I do all my exploring alone, or with one other person. This means I travel at my own rate, keep loads light and do not have to coax a group into exploring when they are more interested in eating, drinking or being merry." He also goes caving to collect biological specimens.

He is an amateur zoologist of some distinction. He is particularly interested in snakes, lizards and frogs. However he has also made collections of bats, both from inside and outside caves, and insects. A book "Reptiles and Amphibians of Bougainville" is in progress, and another "Snakes of New Guinea" is planned. He has a number of biological papers published. Systematic recording and publication have been Fred's greatest contribution to P.N.G. speleology. His paper on the caves of the Porol Ranges published in 1967 by S.S.S. represented the first major systematic report on a P.N.G. cave area. This has been followed by a number of other papers on caves of all the areas where he has caved. He is happier in horizontal systems than vertical ones.

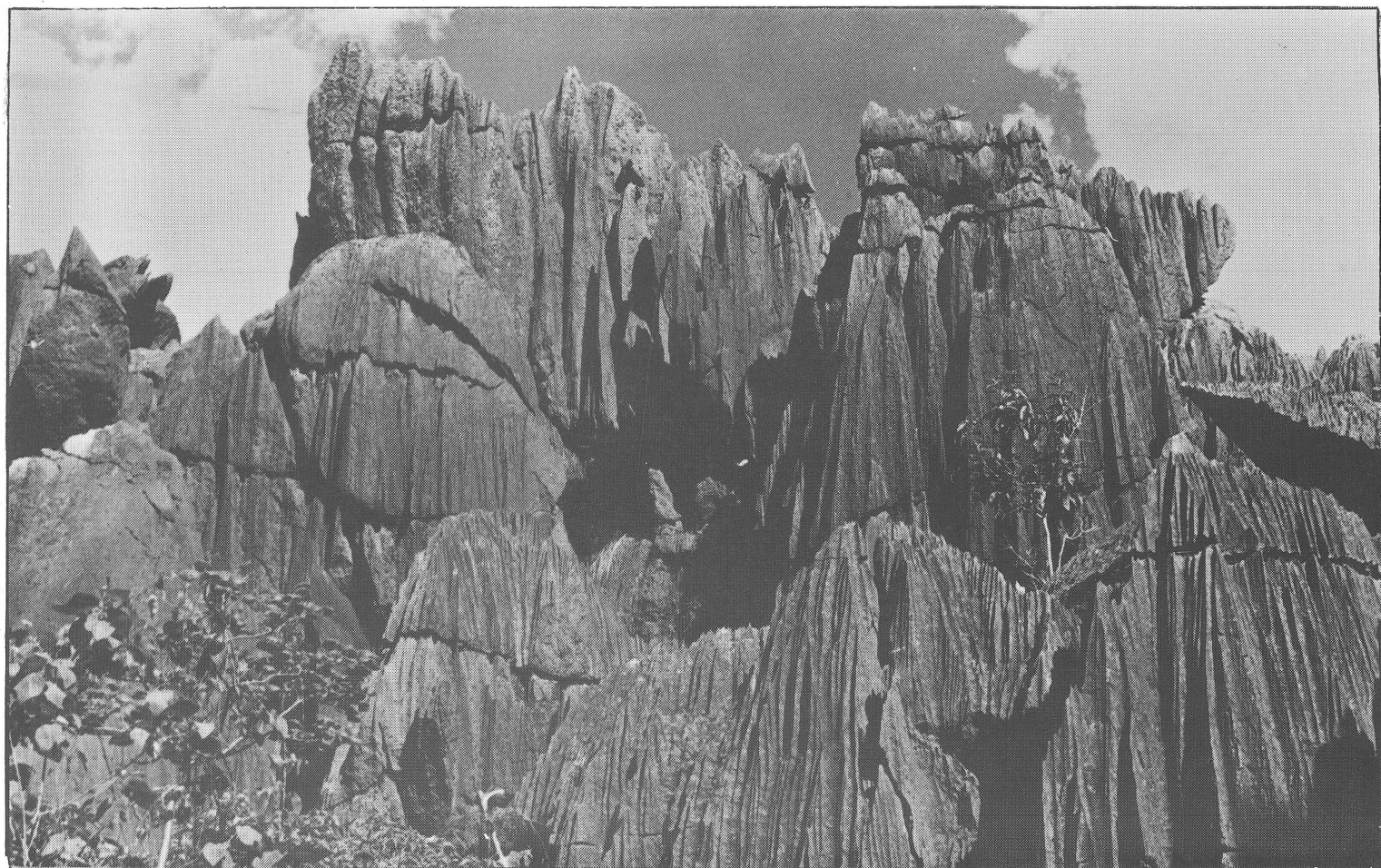
Fred married his wife Maria in 1967 and has a son and daughter. He is an auction freak (Freakus auctionii), a compulsive attender and bidder at public auctions. He has accumulated a room filled with buys which will be useful 'one day'. In the middle of an otherwise intelligent conversation, he is likely to break into a monologue on whether it was a Pipistrellus or a Nycticeius he collected from a certain cave in May, 1964. But apart from that he's a nice bloke who has made a major contribution to caving in P.N.G.

R.M.B.

* * *

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