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Niugini Caver, Volume 1, No. 2, April 1973

R. Michael Bourke

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A map of New Guinea and surrounding islands, including Vanuatu, the Solomons, Bougainville, and parts of the Philippines. The map highlights several areas with prominent limestones, indicated by cross-hatched patterns. These areas include the Lavani Valley in the west, the Telefomin region, the Koroba area, the Porol Scarp, the Mt. Hagen region, the Mumeng area, the Kikori region, and the Daru area. Other labeled locations include Vanimo, Wewak, Madang, Irian Jaya, Port Moresby, Javere, Bereina, Kandrian, New Britain, Rabaul, Baining Mts., Gaulim, New Ireland, Kavieng, Los Negros I., Manila I., Bougainville I., Kiriwina, Trobriand I., and Woodlark I. A scale bar at the bottom right indicates distances from 0 to 200 miles. A legend at the bottom left explains the cross-hatched pattern: 'SEDIMENTS IN WHICH LIMESTONES ARE PROMINENT (AFTER P.W. WILLIAMS)'. A north arrow is located in the upper right corner.

Niugini Caver is the newsletter of the Papua New Guinea Cave Exploration Group.

Volume 1 Number 2. April, 1973.

Price 50 cents per issue. \$2.00 per annum.

Editor R. Michael Bourke, D.A.S.F., Keravat, East New Britain, Papua New Guinea.

Typist Jean Schafferius. Production Ian Cooper.

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* * *

The cover shows the areas in Papua New Guinea where there occur sediments in which limestone is prominent. It was compiled in 1968 by Prof. P. W. Williams from all the available information at the time. The map was first published in Geological Society of America Bulletin 83: 761-796.

TOKTOK BILONG EDITA

There was a most encouraging response to the first issue of Niugini Caver, so here's the second. It is produced in the name of the Papua New Guinea Cave Exploration Group. The P.N.G.C.E.G.? It is an association proposed by Kevan Wilde and Van Watson of anyone who is caving in P.N.G. The Group has no office bearers, meetings, or finances but hopefully will amass a reference library of periodicals, maps and trip reports.

Your editor is still out of pocket so a subscription by any Papua New Guinea cavers who have not yet paid would be appreciated - also the names and addresses of potential subscribers who have not received a copy. Niugini Caver will be sent free to any caving society willing to send their publication to the P.N.G.C.E.G. Societies wishing to do so are asked to indicate this.

Keep those contributions coming in. As there are not exactly hordes of assistant editors, cartographers, typists, production men, and stamp lickens (to put it mildly), maps and articles in as complete a form as possible are appreciated. Maps should be done on quarto size or smaller, in black ink and with full information given (scale, instruments used or grade, surveyor, North direction, date and legend). Use international units (metres, not meters, mate.)

* * *

MAPS OF P.N.G. CAVES

The Speleo Handbook produced by the Australian Speleological Federation is THE reference book on Australian and P.N.G. caves and caving. A second issue is now being produced and will include map lists.

Anyone holding unpublished maps and sketches or knowing of cave maps in any publication except the widely available literature (e.g., Cave Toktok, Helictite, J.S.S.S. etc.) is asked to send details of the maps to Michael Bourke (D.A.S.F., Keravat, E.N.B.) who is compiling the map information for the Handbook. The following data is required:

- Name of cave or map;
- Cave location;
- Instruments and methods used or Cave Research Group of G.B. standard;
- Scale;
- View (Plan, cross section or longitudinal section);
- Date;
- Publication details;
- Surveyors/Draftsman;
- Where map is held;
- Other data (e.g., adapted from another map or compiled by).

AUSTRALIAN SPELEO ABSTRACTS

A.S.A. is a journal providing abstracts of all the current caving literature in Australia and P.N.G., and is produced every six months by the Australian Speleological Federation and the Sydney Speleological Society. If you are interested in any of the many and varied fields connected with speleology, A.S.A. is a must. All the P.N.G. cave literature is included. The latest issue contains 26 P.N.G. abstracts for the first half of 1972.

Five issues have now been produced. Subscription is \$1.50 for two issues for 1970, 1971 and 1972. The 1973 rate will be \$2. Send subs to P.O. Box 198, Broadway, N.S.W. 2007.

* * *

THE NEW CONTRIBUTORS

Chris Borough is a former member of the Sydney University Speleological Society. He caved in the Highlands in the early sixties and later in New Britain.

Iyo Mesibere is from Tufi in the Northern District and is currently a final year student at Vudal Agricultural College. The trip described here was his first caving experience.

Bill Sanders has been caving very actively in the Highlands since last year. He was one of the four on the first descent of Bibima cave.

* * *

CORRECTIONS NIUGINI CAVER VOLUME 1, NUMBER 1

Cover. Bougainville and the Vogelkop Peninsula in Irian Jaya did not come out too well on the map. Sorry chaps. By the way, inclusion of Irian Jaya on the map of New Guinea does not indicate any political overtones for unification.

p. 2, paragraph 4. The reference (Rickwood 1955) was omitted and is:

Rickwood, F. K. (1955). Geology of the Western Highlands of New Guinea. J. Geol. Soc. Aust. 2: 63-82.

p. 15, paragraph 3 line 2 should read ".....passage without upper levels....."

* * *

NEXT ISSUE

- ✓* Irapui cave in the Porol Scarp. P.N.G.'s longest.
- ✓* Javavere map.
- * Carstenz in Irian Jaya.
- ✓* Papuan caves.
- ✓* New Ireland P.O.W. cave.
- ✓* Mendi caving.
- ✓* Kev Read's Highlands exploits from a few years back.

AFARURU CAVE, SNAKE RIVER AREA, MOROBE DISTRICT

H. Gallasch *

~~This caving area was first discovered by the author in November~~
1969. Access was by road from Mumeng, a patrol post on the Iao-Bulolo highway. It was a spectacular drive along the Snake River Gorge. On either side the mountains of the Kuper Range towered to almost 2000 m. At times the road clung to the side of the mountains, other times it descended almost to the swirling torrent of the river. A beautiful sight was the cascading of an unnamed stream over the opposite cliff, 300 m into the river below.

From where we halted at the Mission on a spur overlooking the Snake River, it was some 20 minutes brisk walking through the kunai to Sogaiyo village. Here we were met by the luluai who offered us some juicy sweet oranges, rather a rare commodity in P.N.G. A score or so of young boys were interested in coming with us to the cave. They followed us through the gardens and down a steep limestone hill into the gorge. Through this gorge runs a tributary of the Snake River.

In the outcropping limestone, not far above the bottom of the gorge, was a narrow fissure which was the entrance to the cave. This is called Afaruru by the local people. This cave is the one named Awarida in the ASF Handbook (Champion 1968) and Arbaruru by Brown (1973). Maahs (1951) uses the name Afaruru also.

With torches and candles we entered the cave. Through the first section we were accompanied by boys bearing burning fire-brands in one hand. In the other they held brushes to wield and strike down flying foxes and bats. These would be an addition to the evening meal. Many bats occupied this section and guano was piled on the floor. The roof and sides of the small chambers were darkened by dust and smoke.

~~At the end of the last small chamber, we had to revert to~~
hands and knees and wriggle through a small opening into the next section. As we were moving between huge boulders, we did not at first realize the large size of the 'cathedral' chamber we had entered. The right side wall of this chamber was massive, to a height of perhaps 20 m, and in places covered with palisades of stalactites. On the left were several openings to a horizontal crevasse. This area was richly decorated in stalactites of varying hues of cream and brown. In the floor were deep scoured potholes. Far below, water could be seen rushing beneath the floor.

At the end of the main chamber we followed a fissure through to the edge of a rushing stream. This emerged from the darkness of a small passage on the right and churned down into a hole on the left.

* D.A.S.F., Keravat, East New Britain.

I edged over a narrow plank someone had placed across this 2 m wide stream to a 20 cm wide ledge on the opposite side. After testing this slippery ledge, I decided to give it a miss! The water level was higher than on previous occasions.

It was on our return that I found, near the end of the 'cathedral' chamber, an obscure but quite large opening into a new tunnel. This I followed for some 50 m to a junction with a similar but slightly larger passage at right angles. This was followed for a considerable distance to the right until progress was halted by mud fill. The thickness of mud would appear to indicate that this was at times a stream passage. In the other direction, after perhaps 70 m from our entrance, we were halted on the brink of a chasm. This cut diagonally across and was some 12 m deep and of unknown length. The roof was far above. It is probable that the passage continues across the other side of the chasm. Although the first two sections of the cave are frequently visited, it may have been the first time that this later portion had been entered.

When we arrived back at the 'cathedral', a group of villagers were searching for us. Each had a burning firebrand. They were spread throughout the chamber and this fiery illumination and the swirling smoke looked like some unearthly 'inferno'.

Maahs (1951) relates the following legend. In the distant past, the people recall, two brothers, Rukbakun the elder, and Monugon the younger, lived in the gorge near the cave. These two would paint on the cliffs near the cave but the water rushing from the opening tended to wash the paintings away. The brothers therefore broke off a stick from the Bruech tree and poked in the cave, forming a new channel to drain away the water. The water now enters the river at the base of the mountain while the paintings remain dry, far above water level.

One day the two brothers followed through the cane and came out on top of the mountain. Here they saw a group of people dancing. They re-entered the cave and then walked along another passage. Again they emerged on the mountain top and saw a group of women dancing. The two brothers made love magic and returned with their new wives to live in the gorge. When the brothers eventually died, their children placed them in a niche in the cliff face, which thereafter became the burial place for all their descendants.

By the time we had made our way back to Sogaiyo village it was already dusk. There are reputed to be several small caves in the vicinity of Afaruru, but these would have to wait until a future trip. On this excursion something in excess of 300 m of passage was traversed. Champion (1968)

records the cave as 600 m long. During periods of low rainfall, it is possible also to follow upstream along the cave river.

There are a group of burial caves (overhangs) nearby. These will be described in another article.

REFERENCES.

- Brown, Lex (1973). Awarida Cave and Associated Burial Caves. Down Under 12(1): 26-27. Newsletter of the University of Queensland Speleological Society.
- Champion, C. R. (1968). Caving and Karst Areas in Papua and New Guinea. in Matthews, P. (Ed.) Speleo Handbook. Australian Speleological Federation. Sydney.
- Maahs, Arnold M. (1951). Bones of the Buangs. Walkabout 1st December, 1951 pp. 14-18.

* * *

A LARGE CAVE AND DOLINE NEAR TUKE VILLAGE, POMIO SUB-DISTRICT, NEW BRITAIN

C. J. Borough *

Much of the island of New Britain is limestone but is almost a complete unknown from a speleo's viewpoint. The big problem, as with the majority of Papua New Guinea's limestone areas, is lack of access. Native populations have concentrated around relatively fertile areas of moderate topography and with the exception of the upland regions this tends to completely exclude the limestone areas which can only be described as extremely rugged. It is so difficult to walk into these areas that even many experienced Papua New Guinea cavers would not have encountered the severe karst topography that is so typical. The karst landscape consists of endless sinks with almost vertical sides near the outer edge of each and clothed in dense forest. Rainfall is generally in excess of 5000 mm (200"). It can only be described as impossible country and I never succeeded in pushing more than a km into it from one edge. Army maps show two remarkable features on one of the limestone plateaux North of Pomio in Eastern New Britain. They are a large hole about 1.5 km long and 460 m deep and a smaller hole, 0.5 km wide and 380 m deep. For the average caver, this is too much and I drooled at the prospect of seeing these immense holes.

When good air photo coverage became available I was able to pinpoint the position of the smaller of the two holes and arranged to fly over the hole in a helicopter. Because of the ground elevation it was not possible to climb very high above the plateau in

* c/o Forest Research Institute, Forestry and Timber Bureau,
Yarralumla, Australian Capital Territory. 2600.

the helicopter. It was almost impossible to find the hole despite its size because of the very nature of its formation - a collapse of a large underground cavern plus all the overburden. The hole was eventually located and must be one of the wonders of the world - just as described on the army map, though possibly more like 450 m deep and with a very large river flowing across the bottom. The sides are completely sheer and bare rock is visible around most of the sides (very rare in New Britain!)

With the information about the river I checked the air photos again and found what appeared to be a river flowing from nowhere and having a village right on the river. It seemed a reasonable guess that the hole a few kilometres away and this river were connected so I contacted Kevin Read who undertook a 150 km sea journey in his speedboat to join me at Open Bay. We flew in to the village by helicopter and were able to spend a couple of days exploration. The river by the village was indeed large and fast flowing (9 m wide 1.5 m deep flowing at about 20 km/hour) and came from a large railway tunnel type cave. There were no alternate passages or ledges so Kev and I decided to try inching up the stream. The technique evolved had myself holding on by the fingertips and lying in the current whilst Kev climbed around me until he could get a finger hold. The system failed at the first sharp corner and we were rapidly returned to the exit by the current. Assuming the river to be an impossible route, we attempted to reach the BIG HOLE on foot. With extreme reluctance the local people agreed to take us near, but not to, the BIG HOLE as it was a place full of devils etc. (these being ravenous crocodiles who supposedly lay in wait at the bottom of the BIG HOLE). After many hours of vertical toil and pleasant plateau walking we came across the lip of the hole. We climbed down as far as possible and belayed down to the extent of our rope (60 m) but we guessed that we were still 300 m off! We reluctantly gave up when the rains came and slogged back to the village with one conclusion - impossible without incredibly costly gear, transport and bods. I believe we were the first of many cavers who will experience a feeling of disbelief at seeing such a wonderful spectacle but will also feel despair at being unable to enter a truly magnificent, guaranteed virgin cave.

Editor's Postscript. I flew over the doline in December 1972 and would estimate depth as 200-300 m. The diameter is of the order of 400 m at plateau level and 200 m at the bottom. With an almost circular shape and near vertical sides of exposed limestone, the doline is indeed a spectacular sight. River flow in the doline and at the efflux (from Chris' photos) appears to be much less than the 75 m³/sec he estimated. It is more like 4-6 m³/sec. Still a very impressive cave ruin.

R.M.B.

THE 1972-3 U.Q.S.S. NEW BRITAIN EXPEDITION

R. Michael Bourke *

PERSONNEL. Michael Bourke (leader), Lex Brown, Harold Gallasch, Lesley Lemon, Pauline McMahon, John Webb.

PERIOD. 17th December, 1972: First member departs from Rabaul. 9th January, 1973: Last member returns to Rabaul. Main party left Rabaul 19th December and returned 6th January.

TRANSPORT. Boeing 727, Fokker F27 (to Rabaul), Piper Aztec, Cessna 172. VW1200, Toyota 3-ton truck, Toyota Stout, three tractors. Admin. trawlers Andewa, Andera, Nimba, outrigger canoes (with and without engine), bamboo raft. Party was walking for 12 days. 30 carriers employed daily. 250-300 men, women and children employed as carriers.

INTRODUCTION. The aim of the expedition was to explore and document Ora Cave in the Pomio Sub-district of New Britain located at 151°40'E, 5°12'S. Following reports of a very large doline in a limestone plateau North of Pomio, Mike did an 8-day trip to the doline in April 1972. He entered the doline, but did not reach the bottom. A cave entrance taking water was sighted. An expedition by the University of Queensland Speleological Society to explore the cave was proposed and a report published (Bourke 1972).

Planning for the expedition started in Brisbane in June with 11 potential members. Mike returned to Keravat, New Britain in July 1972 and the organization continued at Keravat and in Brisbane. Lex was in charge of planning in Brisbane.

It was intended to fly from Rabaul to the airstrip at Nutuve Catholic Mission in the middle of the island. However, the strip was washed out before it was opened and the expedition had to fly to Palmalmal Plantation on Jacquinot Bay on the South coast. (Fig.1) From here transport was by tractor to the plantation, thence launch across Jacquinot Bay and then tractor to Waterfall Bay. A day's walk to Nutuve, another to Ora village and another up the cliffs, across the plateau and into the doline were planned. In fact it took 8 days to get the main party from Rabaul to the doline instead of the four planned.

Most of the equipment from Australia was shipped to Rabaul in November. Derek Clark, Hal and Mike made a reconnaissance flight over the area in December in a Cessna 172. Derek had to pull out of the trip a few days before we left because of back trouble.

* D.A.S.F., Keravat, East New Britain.

ORA CAVE AND DOLINE The doline is the largest known doline in a large limestone plateau. It is situated in Yalam limestone which has a maximum measured thickness of approximately 1100m. The limestone outcrops over 550,000 hectares North, South and West of Pomio. Plateau altitude is 600 m - 1500 m a.s.l. At Ora doline it is about 1130 m (3700 ft) a.s.l.

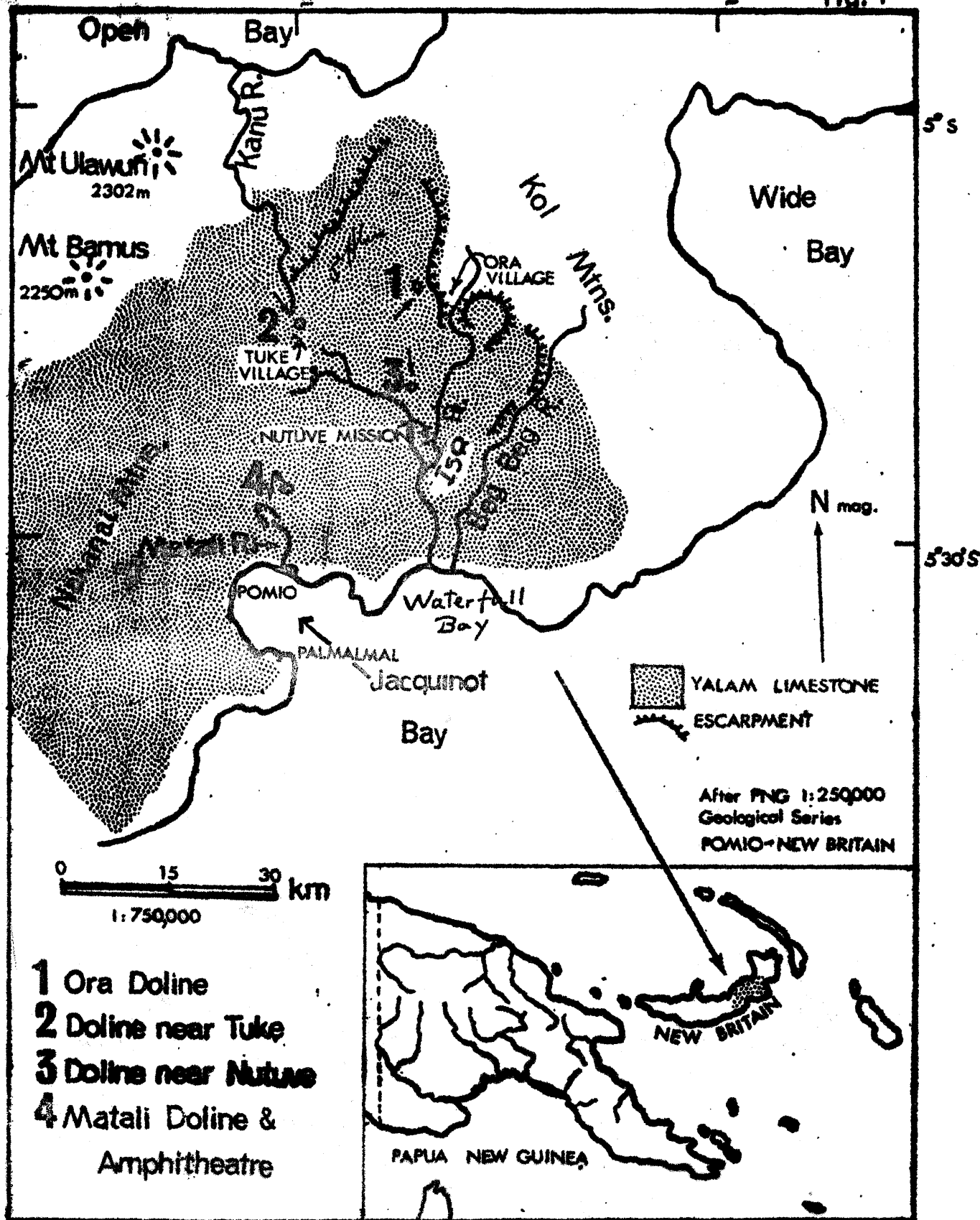
The topography is one form of polygonal karst termed cockpit karst and is covered in tropical forest. It consists of innumerable adjoining dolines or cockpits generally 30-100 m deep that pit the landscape. Residual hills surround the cockpits, but these are not the rounded conical hills termed cone karst described elsewhere from P.N.G. The hills tend to be aligned so as to form a series of crooked ridges. The sides of the cockpits in some areas are so steep as to preclude overland travel. Drainage on the plateau is underground and stream effluxes occur around the edge of the plateau near the base of the cliffs.

Huge limestone cliffs bound the plateaux in places and are formed where rivers cut through the limestone. Cliffs 300 m high are common and some are probably up to 900 m high. The cliffs, gorges and karst topography give the country a spectacular appearance from the air.

Four exceptionally large dolines are known to us from the area North of Pomio. (Fig.1) One is only a few kilometres NW of Pomio and another smaller one near Nutuve was sighted from the air. Near Tuke village is another marked as "Sinkhole approx. 1250' deep", on the military maps. This was partially explored by Chris Borough and Kevin Read in 1968 (Borough 1973). Ora is the largest of the dolines. (Fig.4) It is marked as "Sinkhole approx. 1500' deep" on the military map. It is in fact a double doline (an uvala) with a bridge across the centre. Our survey showed it to be 900 m long, 560 m wide, and 268 m (880 ft) deep.

At the bottom of the doline a river emerges from a cave entrance, stays on the surface for 50 m and then disappears into another cave. About 1.5 km away and 51 m lower a river emerges from the cliff 342 m (1121 ft) high that forms the edge of the plateau. The efflux is 55 m up the cliff and forms a spectacular waterfall where it emerges from a cave entrance some 10-20 m high to form a tributary of the Iso River. The river in the Ora doline and the one that emerges from the cliff are probably the same. Flow rate at the waterfall ($5.45 \text{ m}^3/\text{sec}$. 193 cusecs) is of the same order as that measured at the bottom of the doline ($5.69 \text{ m}^3/\text{sec}$. 201 cusecs) and in the cave ($4.04 \text{ m}^3/\text{sec}$. 142 cusecs). (Figs. 2 and 3)

fig. 1



From the bottom of the doline one can travel underground upstream and downstream. (Fig. 5) Following the river in the downstream section it is possible to move relatively easily for 105 m before it becomes necessary to cross the stream. The chamber is 15-27 m wide and about 27 m high with the stream occupying half to all of the cave floor. By crossing the stream twice in this section we were able to explore 168 m of passage before progress was halted by a waterfall that occupies the entire floor of the cave. Although only a few metres high, the waterfall stopped us because beyond it a person in the river could not be effectively belayed. The cave with the roaring river continues downstream. The river occupies the entire cave floor. It should be possible to explore further by traversing above the waterfall.

Moving upstream from the bottom of the doline we entered a large chamber. From the roof hung huge stalactites with a weathered appearance. Flying foxes were congregated in places on the ceiling. At the upstream end of the chamber the river emerges from a small passage impossible to enter because of the concentrated flow of the river. Our survey showed it to be 85 m between this emergence and where the river disappeared further upstream.

By moving in the chamber in a southerly direction we came out in the bottom of the other half of the twin doline. Sheer walls over 100 m high surround the bottom. Away from the roar of the river the quiet of the doline was a pleasant change.

From the doline we re-entered the cave again and followed an old stream passage back to the river. Here the cave was a huge domed chamber 30 m high. Downstream there is a small but spectacular waterfall before the river disappears in a whirlpool into the passage only big enough to contain the river. Upstream we moved through a beautifully decorated section along the river to a lake. Calcite curtains, candle-wax stalagmites, flowstone and stalactites lavishly decorate this area.

The river flows but slowly through the lake some 6 m deep and 10 to 20 m wide. At the end of the lake the roof and water meet thus limiting further exploration. Explored cave was 600 m long and 67 m deep.

DIARY

Sunday, 17th December. John departed for Pomio on the trawler Andewa, with 418 kg of gear.

Monday, 18th December. John arrived at Pomio and went caving.

Tuesday, 19th December. Rest of party flew to Palmalmal Plantation in Aztec charter and thence via tractor and launch

to Ppmio with the rest of the gear. Total weight of equipment 500 kg (1100 lbs).

Wednesday, 20th December. Travelled by tractor, raft, tractor, and canoe and walked to mission base camp near the mouth of the Esis River. No carriers available, so overnighted at priest's hut.

Thursday, 21st December. Trouble getting enough carriers. Entire party and gear moved to mission shed $2\frac{1}{2}$ hours walk from the coast.

Friday, 22nd December. Five of party with most of gear walked to Nutuve (5-6 hours). Hal stayed at shed with 4 patrol boxes. We had problems with pay rates for carriers. Should have been at doline, but three more days to go still. Progress was frustratingly slow. Everyone very tired. Father Benedict's hospitality was beaut as was his freshly baked bread.

Saturday, 23rd December. Five of us got to Ora village after a long day ($8\frac{1}{2}$ -9 hours) on the track. Hal got to Nutuve.

Sunday, 24th December. After a late start we had a look at the efflux which is 1.5 km North of West from the village. Very impressive. Gained our first idea of the problems in moving along the river. Hal turned up at sunset so we had Christmas together. Good to be together again and almost there. Les and Pauline were the first white women in the village.

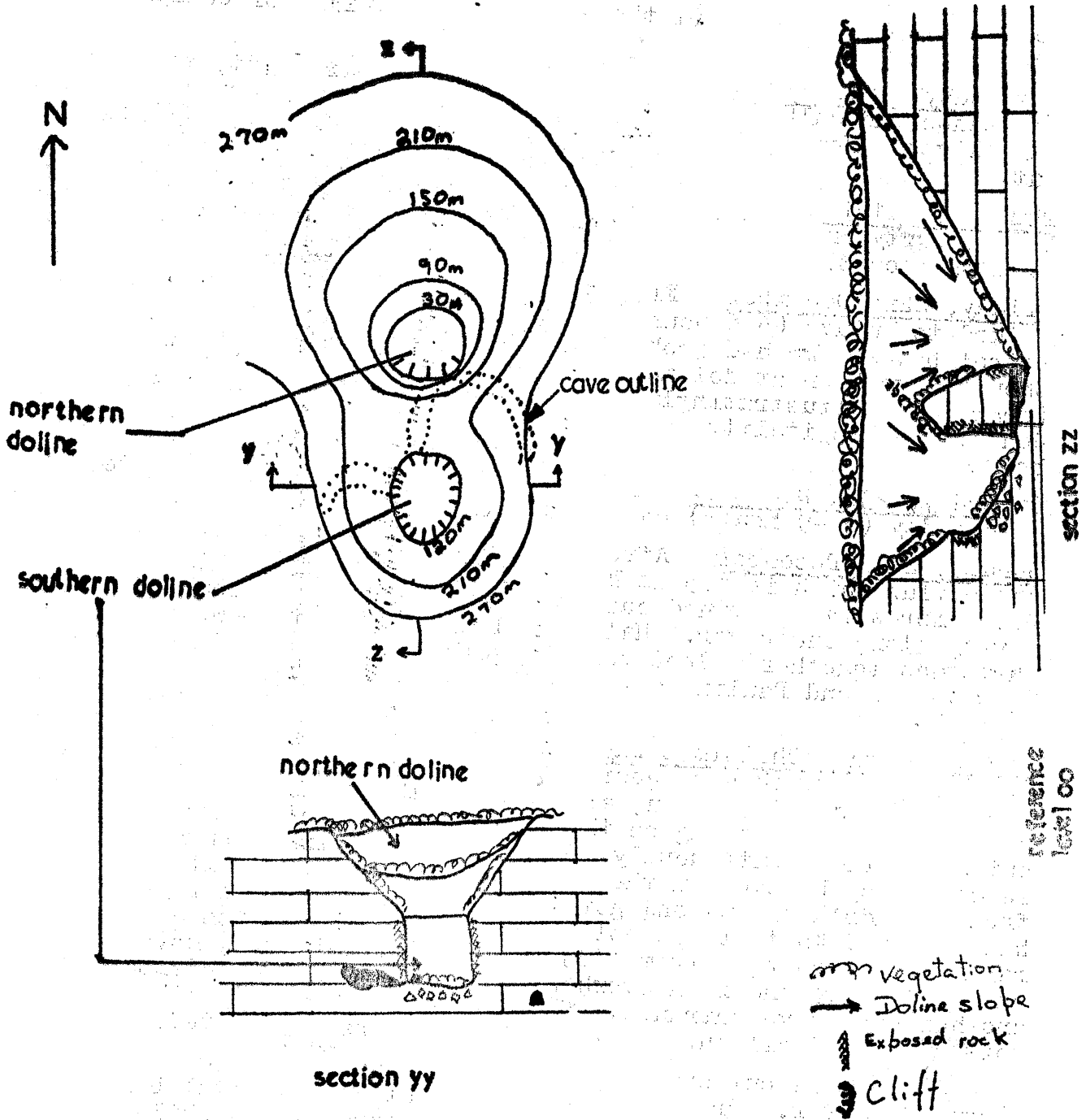
Monday, 25th - Christmas Day. Lex, Mike and John went up to the doline with some gear. From the village we climbed a hill to a small plateau, and then up the cliffs to the plateau proper. Moving on the plateau means going in and out of dolines continuously. None had promising entrances as most were blocked on the surface. Entered Ora doline from the northern end and got to the bottom. The villagers had insisted that it was not possible. At the bottom a raging river emerged from a 23 m high cave entrance, moved on the surface under an overhand and then disappeared into another huge cave entrance. What a sight! Made it all worthwhile and all our worries over carriers evaporated.

A camp was cut out of the hillside and jungle 30 m above the river. From a 35° slope we cut a horizontal bench and erected a house. An earthquake was experienced while setting up camp. The carriers bolted fearing the 'masalai' (spirit) that inhabits the doline, but were restrained by threat of non-payment.

Hal visited the efflux while the girls stayed in the village and read the control barometer. Lex took barometric

FIG 4

ORA DOLINE



1:10 000
 0 100 200 300 400 500 600 metres
DRAWN-ALBROWN.
 U.Q.S.S. 1972/3 EXPEDITION.

Heights by barometric
 levelling. Plan by
 limited compass
 traverse and triangulation
 and interpretation from
 the

readings as we walked into the doline.

Tuesday, 26th December. Lex was ill and rested. John and Mike found a way to cross the stream and explored the southern doline and upstream chambers as far as the lake. The cave downstream of the doline was explored until a river crossing became necessary. Unable to cross without gear. Rigged a rope across the river below the camp to facilitate access to the cave.

Hal, Les and Pauline visited the multiple effluxes some $1\frac{1}{2}$ hours walk South of the village. The streams emerge about 50 m up a cliff face and the water falls down to the Iso River. It appeared possible to follow at least one of the streams in a cave. A dry efflux cave was explored for about 70 m in the vicinity of the multiple efflux.

Wednesday, 27th December. Returned to the lake in the upstream section. Lex and Mike swam in it on an air mattress. Impossible to proceed further upstream as roof meets water. Very disappointing as we had high hopes for this section. Diving would be possible if the water were clear. As the swimmer is hauled back the reflection of his light on the water makes a pretty effect. Being on your own floating in an underground lake at the end of 50 m of rope is quite a thrill. This section of the cave is occupied by millions of small flying insects which are attracted to our lights and got into our eyes, mouth and nose. Extremely annoying. Hal, Les and Pauline came up to the doline from the village with the rest of the gear.

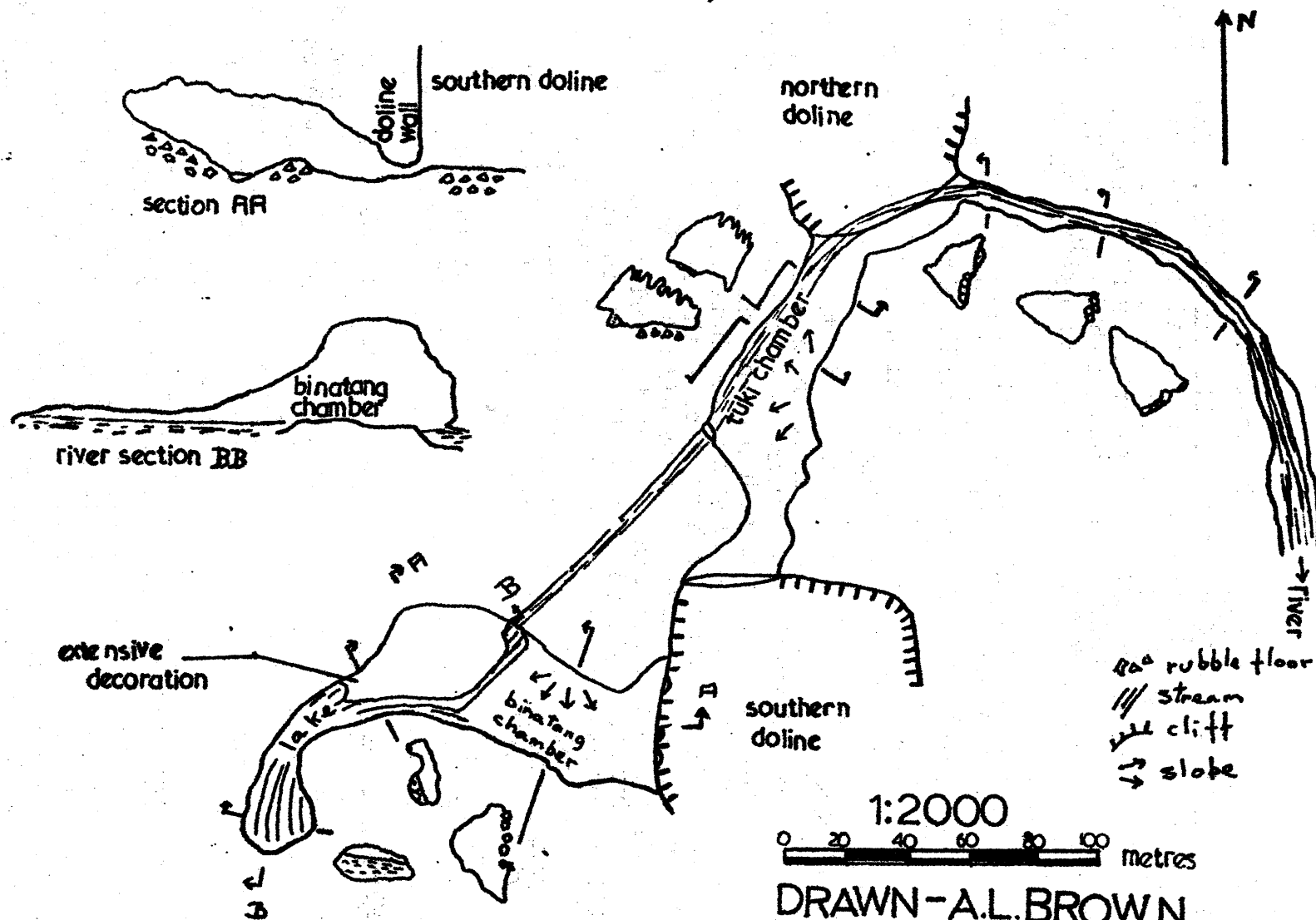
That afternoon we contemplated how best to cross the river in the downstream section. Retired to the surface to try out a method.

Thursday, 28th December. We all returned to the lake. John went to the end to do a sounding but without finding anything new. General exploration in this chamber and the southern doline, but no more passage of any significance found. Hal took photographs, Lex and Mike measured stream flow while the others went downstream to look at the lower section. This was the only day Les got underground.

Friday, 29th December. Continued exploration in the downstream section. Crossed the stream twice using our new technique. John led one crossing and Lex the other. We were stopped by a waterfall 1.8 m high. John started a climb to get around the waterfall. Progress downstream is very slow but satisfying. We had little hope of getting far, but were enjoying it, and learning a lot about river techniques. The passage was a very large tunnel some 21 m high and wide. The entrance was very attractive as one looked

FIG 5

ORA CAVE, NEW BRITAIN



1:2000
0 20 40 60 80 100 metres

DRAWN - A.L. BROWN.

U. Q. S. S. 1972/3 EXPEDITION.

C. R. G. GRADE 5 STANDARD.

out to daylight and the green of the jungle. The roar of the river was always with us except in the southern doline. Les had a rest day as her leg, injured in a fall, started to become very painful.

Saturday, 30th December. Usually we were up by 5.30-6.30 a.m. At 8 a.m. when nobody was up, we decided to call it a rest day. Hal took a few surface shots and collected molluscs.

Sunday, 31st December. Surveyed most of the cave in 8 hours. Hal took photos. John collected bones. Pauline tried two squeezes but no goers.

New Year's Day, 1973. Les had a sleepless night with her leg which seemed to be getting worse. Decided that Hal, Les and Lex would go to the village tomorrow to get medical advice on the radio and possibly a helicopter. Our domestic sent back to the village for carriers.

More surveying, some photography and stream flow measurements done. Climbing gear recovered from climb. Lex and Mike tried to get to the top of the bridge in the doline, but were beaten by dark. Hal, John, Lex and Pauline went back for more photography at night. The flying insects were not present in the upstream section. Up to 10 hours underground. Hal, John and Lex started to have feet trouble.

Tuesday, 2nd January. Les was strapped into a stretcher made from trees, sacks, bush rope and tape. Four men carried the stretcher and four relieved except on very bad pitches where eight men were needed. The trip down was okay, despite a 40° slope out of the doline and near vertical pitches on the cliff. Only when the carriers started running was Les knocked about. Lex contacted Civil Defence in Rabaul for medical advice. The chopper was to cost \$1200. Relieved to know it was possible to carry the stretcher okay.

John and Pauline did a few cross sections in the downstream section and collected the fixed ropes. Mike read the base barometer in camp while Lex took readings on the way out. After lunch Mike and Pauline spent 4 hours trying to get to the top of the bridge but were confronted with cliffs and ran out of time. The doline was sketched.

Wednesday, 3rd January. John, Mike and Pauline did a traverse in the southern doline and on the top of the doline. Came down to the village. Lex was on the radio a lot and we had to use a relay station at Kokopo as Civil Defence in Rabaul have poor reception. The words, "VJ8 Delta Tango calling Rabaul" were to become very familiar in the next few days. Helicopter ordered and then cancelled. Les feeling better but leg still very swollen. Surprised to hear news of the injury on the radio news in several languages. Hal buying artifacts madly

and collecting stories about the masalai in the doline. The masalai, Tuki, is the most powerful one and amongst other powers, he can cause swelling of limbs.

Thursday, 4th January. Walked to Nutuve in 10 hours, Les taking the long hours being jogged on the stretcher very well. Only view for her is the jungle canopy. John and Mike with bad feet. Big hassle at Moga village trying to get sufficient carriers, but got through finally. Could not get Rabaul on the radio. All pretty weary.

Friday, 5th January. Walked to mission base camp on coast in 8½ hours. John and Mike with very painful feet. All weary again. No trouble getting through to Rabaul on Civil Defence frequency. Aerial rigging while on the move a bugbear.

C.D.: "Reception is very good, Delta Tango. What is your Aerial today? Over."

Lex: "Several mankis (small boys) holding up the wire on two bamboo poles."

Saturday, 6th January. Walked to Sibil River and crossed by canoe and then tractor to Cutarp Plantation. Les on the stretcher and Pauline went by motorized canoe to the plantation. Admin. launch to Palmalmal. After a lot of radio work we got a charter in despite the heavy cloud cover. Last message on the radio from Civil Defence in Rabaul, "The Aztec should be at Palmalmal in half an hour. You can come home now." Five of us returned to Rabaul with some of the gear. Met at Rabaul by ambulance, doctor, Civil Defence, and reporter. Les taken to hospital where it was found she had an internal infection in her leg. Lex returned from Palmalmal to Pomio with the six patrol boxes by launch.

Sunday, 7th January. Lex returned to Palmalmal on the launch.

Tuesday, 9th January. Lex back to Rabaul on a Cessna charter with the rest of the gear. Photographed the doline on the way back.

Les was on the way to recovery after a week in hospital.

EQUIPMENT

(a) Lighting. Both carbide and electric lighting were used on the trip. Carbide was taken for economy and proved invaluable particularly in the surveying portion of the trip, but the initial exploration of wet caves using carbide is inconvenient if not impossible. Without any form of battery charging available, dry cell batteries were the only source of power. Eveready "lantern batteries" were used, and are expensive (\$3.00 each) when long periods underground with a large party have to be planned for. There is no problem of shorting across the terminals of the batteries even when completely submerged for long periods. Mine Safety Appliance headlamps functioned satisfactorily in water, but are not waterproof and had to be drained and dried each evening. However, water affected the thread of the ring holding the lamp glass in place

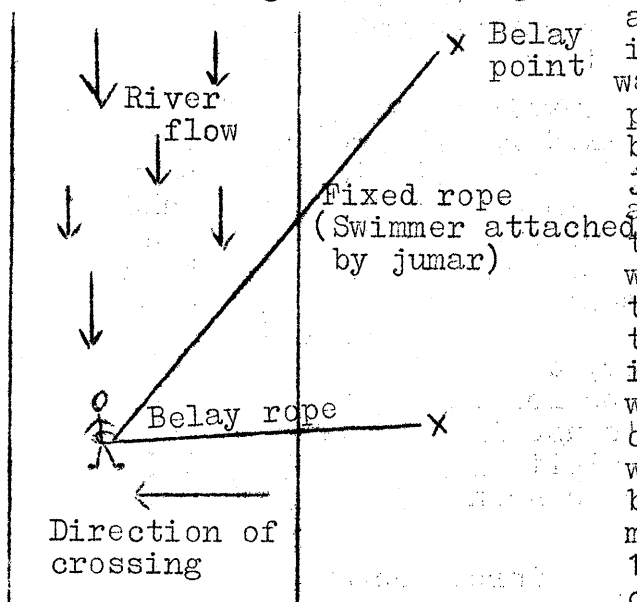
and the glass was lost from several of these lamps. The dry cell batteries were purchased in Rabaul and this could have proved a severe blow to the expedition. Several of the batteries (all in their original sealed plastic) had no life and the rest gave very limited service. Any future expedition to a humid country should ensure the quality of their batteries, preferably by buying them direct from the manufacturer in Australia. Emergency torches were small hand torches, but while convenient, soon deteriorated in water. One larger waterproof hand torch used as an emergency torch was completely satisfactory.

(b) Ropes. Where rivers are involved, usage of rope can be high. At one stage, four fixed ropes were in position at river crossings in only 600 m of cave. Had the cave been more extensive, or vertical pitches encountered, there would have been a shortage of rope. Expendable rope, which could be cut to minimum length for these crossings would have been desirable. Plastic hose rope protectors were used and were invaluable in avoiding rope damage at these crossings where repeated use of the fixed rope every day would have caused wear. The value of a propylene rope for exploring the lake is mentioned below. After a week's use in the waters of the cave, ropes were stiffening with calcite deposits and had to be washed thoroughly in rain water as soon as possible after return to Rabaul.

(c) River and Lake Techniques. Three buoyancy vests were used (full life jackets would have been too bulky) for lake work and deep river crossings. For some people the vests would not keep a fully clothed caver afloat, but they provide sufficient buoyancy to cancel the effect of waterlogged clothes and gear so that normal treading water was adequate. Other people were kept afloat without treading water. The 75 m of lake was investigated by using an air mattress under one arm and swimming with the other arm. Fully clothed, one gains only about 20 cm every stroke, so better propulsion was made by floating and pushing along the wall wherever this was possible. The propylene rope was used as the lifeline, and its property of floating on water greatly increased its safety. A terylene rope was used initially but the rope sank to the bottom as the swimmer moved away and there was a very real danger of the rope snagging.

River crossings were difficult and dangerous. Two crossings were made by rock-hopping, but here, even with a belay, a fall could have resulted in quite a severe battering from the stream with the possible danger of being swept under rocks. For the second crossing we had to develop a method of pendulum-ing across the stream. A fixed rope attached 10-15 m upstream of the crossing point formed the support rope which provided

balance against the force of the current. The swimmer attached his waist-loop to the rope by twin jumars prussikers (one on a small sling) and a rope from the swimmer to the bank was the belay rope by which he could be hauled back should he get into trouble. The belay was effective as the swimmer would only have to be hauled across the current - the support rope still taking all the strain. The purpose of the jumars was to allow the swimmer to move up or down the support rope as footholds in the river-bed dictated, and to avoid having to travel against the current as the far bank was



approached. After the initial crossings, fixed ropes were rigged and it was proved that no matter how light a person is (e.g. Pauline), any stream becomes manageable by donning life-jacket, clipping on to the fixed rope and hauling yourself across. Even this is not without danger, as John was twice flipped completely around the rope by the current. We found the use of whistles in river work is essential. The roar of the river was so great that communication from one side of the river to the other was impossible except by whistle blast - although the distance was no more than 8 m. Standard signals of 1-stop, 2-take in, 3-slack, 4-all clear, are still applicable.

(d) Clothes. Underground we wore trog suit over warm clothes. Two layers were adequate with the air temperature of 20°C. However, some of us were cold when in the river for a while even with a third layer of warm clothes of trog suit over "long john" tops and woollen jumper and longs. Equipped with buoyancy vests, whistle, two light sources and the equipment required for the work at hand (ropes, camera gear, surveying gear), we were usually heavily laden.

(e) Containers for equipment. Nine patrol boxes and a mixture of packs, kitbags and sacks were used to carry our 500 kgs of gear in. Up to 36 kg was carried by 2 men in each patrol box and up to 18 kg was carried in the packs and bags by men, women and children. There was a very definite preference for the packs and prejudice against the patrol boxes. Part of our problems with carriers was due to their aversion to the awkward patrol boxes. They do, however, protect equipment from damage and rain, and can be locked. Carriers sometimes preferred food instead of cash payment in this relatively remote area.

Two collapsible waterbottles (Reliance Products Ltd, Winnipeg, Canada) each containing 19 l were taken. They proved convenient in the camp and their collapsible nature facilitated carrying them when

not in use.

Time Underground was as follows:-

John 37 hrs; Lex 30 hrs; Mike 30 hrs; Pauline 27 hrs;
Hal 25½ hrs; Les 3½ hrs.

Technical Notes. We surveyed the cave to C.R.C. Grade 5 standard. The doline was surveyed using two Pauline Aneroid barometers, and by short traverses in the base and at the lip of the doline, and triangulation from the traverses. The method used was to have one barometer read every half hour as a base station to determine ambient pressure change, and the moving barometer read simultaneously at the required point. The difference in reading gave the elevation difference. Good results were obtained. Attempts to measure ceiling height in the cave with hydrogen filled balloons failed when the balloons broke.

Our aerial slides of the area were used in drawing up the doline. The barometers also gave relative heights of the village, efflux, top and bottom of the doline.

Stream flow measurements were made by segmenting the river cross-section into several uniform channels and determining the hydrolic jump and cross-sectional area of each segment. Flow rates were as follows:-

Efflux	5.45m ³ /second	193 cusecs	5450 l/sec.
Doline	5.69 "	201 "	5700 "
Upper chamber	4.04 "	142 "	4040 "

Bone deposits were collected and their position mapped. Insect specimens and molluscs were also collected. A species of wild banana, Musa maclayi, was observed in the bottom of the doline. This species is known from elsewhere in Papua New Guinea and the Solomons, but has not been previously recorded from New Britain.

Weather Conditions. Few problems were encountered with rainfall. Rain mainly fell in the afternoon and evening if at all. December and January are in the dry season. Annual rainfall is approximately 5000 mm (200 inches) at Ora and at Pomie (15 years records) is 6164 mm (243 inches).

Camping. A comfortable camp was erected from a bush material frame and plastic sheeting. Tables were constructed from bush material. It was planned to have a large central hut for cooking with small tents used for sleeping. However, because of a lack of suitable tent sites, the party also slept in the hut with no discomfort.

The area surrounding the camp quickly turned into a bog

on the very steep slope after a moderate amount of rain. Timber walkways provided some relief. Access to the toilet some 30 m from the hut was a problem under such muddy conditions. A toilet closer to the hut with a good timber walkway would have been more suitable. A flat covered area suitable for changing into and out of caving clothes is also suggested for these conditions.

Menu. The diet was based on dehydrated meat and vegetables evening meals, biscuit and spread lunches, and cereal and egg breakfasts. There was a wide variety and the menu proved satisfactory. Eating habits while hiking and in base camp were different. On the trail, quickly prepared meals were used with much less variety.

Medical. A comprehensive first-aid kit was taken and most items were used. The antibiotics and pain killer were invaluable for Les. Talcum powder for rashes and antibiotic powder for minor cuts were very useful under the humid tropical conditions.

Most of us experienced a foot condition where the skin peeled off. This was attributed to being in water daily for a continuous period in the cave. Hal's and Lex's feet were all right for the walk out as they had a rest day at the village. John and Mike who did not have this rest day, developed very painful feet on the walk out. Antiseptic bandages were useful in dressing feet. Air leg and arm splints were taken. The former was used to protect Les' leg in camp and on the trip out. It is highly recommended. The splint prevented direct pressure from being applied to the leg and allowed the patient to sleep at night.

The Evacuation. Our precautions and arrangements for an emergency proved their value, especially the radio which was lent to us by Civil Defence, Rabaul. A small car battery provided the power for the radio. Insurance to cover the cost of an evacuation was not taken out. It would have allowed us to use a helicopter to bring Les out. An agreement to share the cost of any evacuation was signed by all members prior to departure.

It would have been impossible to carry out Les without the assistance of the villagers. Their care and strength in carrying such an awkward load (sorry Les) was remarkable, even over almost vertical terrain.

We achieved a fair bit of radio and newspaper coverage mainly because of the injury.

Costs. The total cost of the trip ex-Rabaul was less than \$1000, with transport and carriers being the largest items. Food costs were reduced by generous donations by 5 companies. Cost breakup was as follows:-

Transport: \$366 (includes 3 light plane charters, ship freight and tractor hire); Carriers: \$356; Food: \$119 (\$86 worth of donations not included); Equipment purchase: \$85 (for first-aid kit and

caving gear); Insurance: \$52; Miscellaneous: \$18.
TOTAL: \$996.00

Mistakes. On the whole we were well satisfied with the trip. Underestimation of carrier and access difficulties was the biggest mistake. It would have been better for one or two people to move most of the equipment in before the main party, or even to airdrop it into Ora village.

More prior knowledge of the cave would have been useful, but our knowledge from Mike's April trip, aerial reconnaissance, and aerial photographs was fairly adequate.

Insurance to cover the cost of evacuation should have been investigated further than it was.

We used most of our gear. The 3 ladders were not used nor were the field telephones. In other circumstances underground, they would have been used. The pressure lamp used for camp lighting was unnecessary as carbide proved adequate for this. Food quantities worked out very well.

Prospects for further exploration. As discussed earlier, the area of elevated, thick limestone is large (550,000 ha in area, up to approximately 1100 m deep). The underground drainage and large flows in underground rivers must produce extensive cave networks. We explored but one cave incompletely. Lack of time precluded planned surface exploration.

Entrance to further caves must be possible via the known stream effluxes at lower levels or via the thousands of dolines of the plateau all of which take some water. What is needed is old stream passages or smaller rivers. Further surface exploration by a small mobile exploration party seems to be the next step.

A caving expedition in Niugini is a major undertaking requiring considerable planning and pre-trip effort, much more so than to a remote area in mainland Australia, such as Camooweal or the Nullarbor. The variety and uncertainty of transport required and access difficulties are problems as great as the climate and unfavourable topography.

Credits. During Les' evacuation, Civil Defence in Rabaul provided invaluable assistance with medical advice and transport arrangements. Loan of the transceiver is also appreciated. The trip would not have been possible without the 250-300 people of the Kol tribe who carried our equipment and the stretcher. Father Benedict's warm hospitality at Nutuve was very welcome.

Generous donations by the following companies saved \$140, and are acknowledged with thanks:-

Amco Pty Ltd (jeans); Rosella Foods Pty Ltd (Dehydrated meat and vegetables); The Nestlé Co. (Aust.) Ltd. (milk, Milo, chocolate); Cadbury-Schweppes Pty Ltd. (chocolate); Arnott's Biscuits Pty Ltd. (biscuits); Kellogg's (Aust.) Pty Ltd (breakfast cereal).

References.

Borough, G. (1973). A Large Cave and Doline near Tuke village, Pomio Sub-district, New Britain. Niugini Caver 1 (2):25-26.

Bourke, R. Michael (1972). Ora Cave, New Britain. ASF Newsletter No. 56, June, 1972. p. 3

* * *

TRIP TO GAULIM CAVES, GAZELLE PENINSULA

Iyo Mesibere *

This report is condensed from an article in News Views 7 (2): 5-6, the student newspaper at Vudal. Iyo Mesibere is probably the first Niuginian to write about caves.

On 11th February 1973 a party of 7 Vudal students and Ian Cooper set out for the first caving expedition for the year. At LAES we picked up Michael Bourke and a Frenchman George Casala. From Iuvare village past Malabunga High School we walked on a bush track for about 20 minutes to reach our first object, Durwy cave. It is situated in a gully and a stream runs through. It had both entrances open and you could enter from both ends. At first I thought the inside of the cave was lifeless, but I was wrong. There were some cave dwellers ready to meet us - the bat community. There were some interesting things in the cave - like trickling water from the roof, and odd shapes of rock on the roof and floor. We then went on to the opposite entrance and Mr Bourke took out a tape measure and compass to measure the cave so we set to work. The measurements were length 47 m, width 6-15 m, and height up to 7 m.

When we finished with this cave we continued up the stream for the second cave. After some distance we found another small cave. Mr Bourke and Kui crawled under a large damp rock while the rest of us waited. I heard some faint voices from another hole where the stream used to run. Mr Cooper and the Frenchman enlarged the hole with their hands and Mr Cooper got in with a flash light. Soon after he was out with the other two. We then made our way up the stream, then changed direction to another cave.

I was surprised when the villager pointed to the entrance of the cave. It looked like a big hole in the ground that you would

* Vudal Agricultural College, Keravat, East New Britain.

have to climb down to enter. After lunch we started to climb down. This cave is the biggest and is called Luminas. The distance from one end to the other is 460 m. A small stream runs from North to South following the cave. The height of the roof varies from a metre upwards and the width from 1.5 m to 4 m. At one stage we came across an unfamiliar noise in the deep inside and out poured hundreds of bats. In spite of the smell of bats, I enjoyed looking at this cave. We kept moving upstream till we arrived at the dead end which was narrow. There were stalactites and stalagmites in the cave.

From there we returned to the entrance and started moving downstream from the daylight because the entrance is in the middle of the cave. This time we walked some distance and then monkey crawled as the cave was getting low. Soon after, we had to do leopard crawl until we arrived at a point where a person could not go through. At this point we were all in muddy water and were soaked to the bottom. Big Cooper was on his belly in front of me and his 'maus gras' was wet. We made our way back and left for home as we were all very tired. It was good fun so make up your mind for the next caving day.

* * *

OBITUARY - DEREK CLARK

R. Michael Bourke

Derek Clark was killed suddenly in a tragic boating accident with his yacht in Rabaul harbour on 25th March.

A Rhodesian, Derek had travelled widely before coming to P.N.G., including a trip overland to Australia from the U.K. on a motorbike. He was an active yachtsman, climber and caver. He caved in the Highlands up to 1972. A back injury forced him to pull out of the Ora expedition at the last minute and he was considering participating in the Lavani expedition.

His enthusiasm for any activity he undertook, competence and easy-going disposition will be missed by many. The lives of his friends have been richer for having known him. Our only consolation is that his death came suddenly and while doing something he loved so dearly.

* * *

THE CAVING SCENE

There are now 24 starters including 6 P.N.G. residents for the Lavani Valley expedition in August-September. Van Watson flew over the area recently and observed 40 sinks, many of which are taking water. Sinks were 30-70 m deep. The plateau is situated at about 2500 m a.s.l. with resurgences at about 1000 m a.s.l. Paddy Pallin is sponsoring the expedition to the tune of \$1300 worth of gear. Plans are well under way with Bill Sanders, Van Watson and Kev Wilde in there over Easter.

Van was up Chimbu way in February and with Bill Sanders and Tony Madden, checked out 2 holes on top of the Porol scarp. One was full of "fierce bats, batshit and lots of crawling". The other takes water and they got down 30 m with another 45 m pitch left unexplored. Bill and Tony also had a look at a couple of prospects near Bibima but nothing found.

Kev Wilde has been underground a few times since arriving at Bereina. The Brown River road to Bereina from Moresby will open up more limestone to Moresby residents when it gets through in the near future.

Lex Brown (Uni. Qld Spel. Soc.) got underground in February at Mumeng on the Lae-Bulolo road. He and Bill Sanders wandered out to explore Mebile cave (see report this issue) North of Kundiawa one Sunday and got down to 160 m (520 ft) when they ran out of gear but not vertical cave. Unfair, I say. Lex and Les Lemon (one of the two chicks on the Ora expedition) get hitched in a few weeks.

Also in February Mike Bourke, Ian Cooper, 7 Vudal students and a visitor visited 2 of the river caves at Gaulim on the Gazelle (see article this issue). One cave was surveyed and another found. The students are keen for more and have been practising their abseiling the past few weeks. In April Mike, Chris Holland and Jean Schafferius showed Gerry Jacobson from Moresby over the tuff caves near Malabunga. Another small cave was found and Gerry collected charcoal for C14 dating.

A party of 4 spends 3-4 weeks in the Poroma area of the Southern Highlands in May-June doing the preliminary investigation for a hydroelectric scheme. The party will be searching for and exploring caves in the proposed catchment area, flying in daily in a chopper from Poroma. The area is unpopulated and has never been visited before by Europeans. The probable party includes Michael Bourke and Gerry Jacobson. Searching for caves with a chopper and with the Admin. meeting all costs must surely be the ideal way to do it!

Ted Anderson and Clive Champion (of ASF Handbook fame) were in Irian Jaya on a glacioecological expedition to Carstenz recently. Ted reports huge areas of limestone, karst fields, big holes and

areas of tower karst about 2800 m a.s.l.

Thanks to the correspondents who provided the news, and keep sending it in. Any action from the other centres - Moresby, Lae, Bougainville?

* * *

GAGOGANGAMA CAVE, POROL ESCARPMENT, CHIMBU DISTRICT

V. Watson *

LOCATION. Cave No. 8, Porol Escarpment. See locality map, Niugini Caver 1(1):3.

HISTORY. The locals tell of the cave being used to dispose of dead and persons suffering from disease and persons who were not popular, e.g., sorcerers and enemies captured in battle. After surface visits by Europeans the depth guesses varied from 60 m to 200 m.

MAIN EXPLORATION. The main exploration was carried out by K. A. Wilde, V. Watson (N.Z.S.S.) and Dr J. James (S.S.S.), in early June 1972. Two porters were hired to carry the 150 m of terylene 'Jumar' rope and gear to the top of the scarp. The entrance is at the bottom of a small cliff face. To be sure of reaching the bottom, 100 m of terylene was rigged for the first pitch and with the aid of a ladder, V. Watson clipped on to the rope and gently abseiled down. An eerie noise from giant flying foxes, unseen, prompted Van to wait at the bottom of the pitch with a rock in each hand until Kevan arrived to give moral support. There had been talk of ghosts and things by the locals. The first pitch was approximately 50 m and investigation of a hole in the floor showed another drop which was descended by using a nylon rope for abseiling. This pitch was about 23 m and there were three possible loads from the bottom, but were all too tight for us to push.

SUMMARY. The cave was not as deep as we thought it would be, but it was our first big descent and ascent on a single rope by abseiling and prussiking. Total depth of cave approximately 90m. Not worth further exploration.

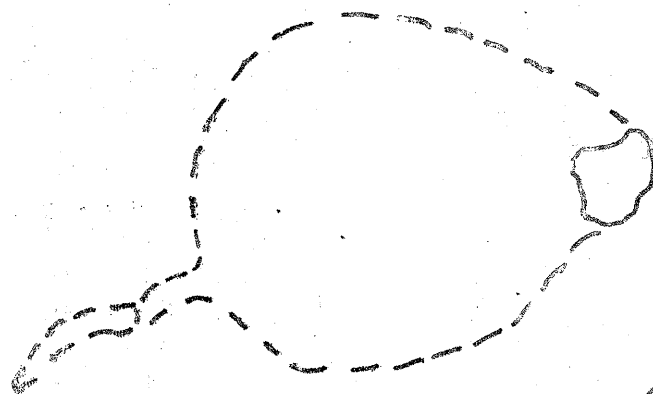
* c/o Carpentaria Exploration Co., Ramu Base, P.O. Box 113, Madang.

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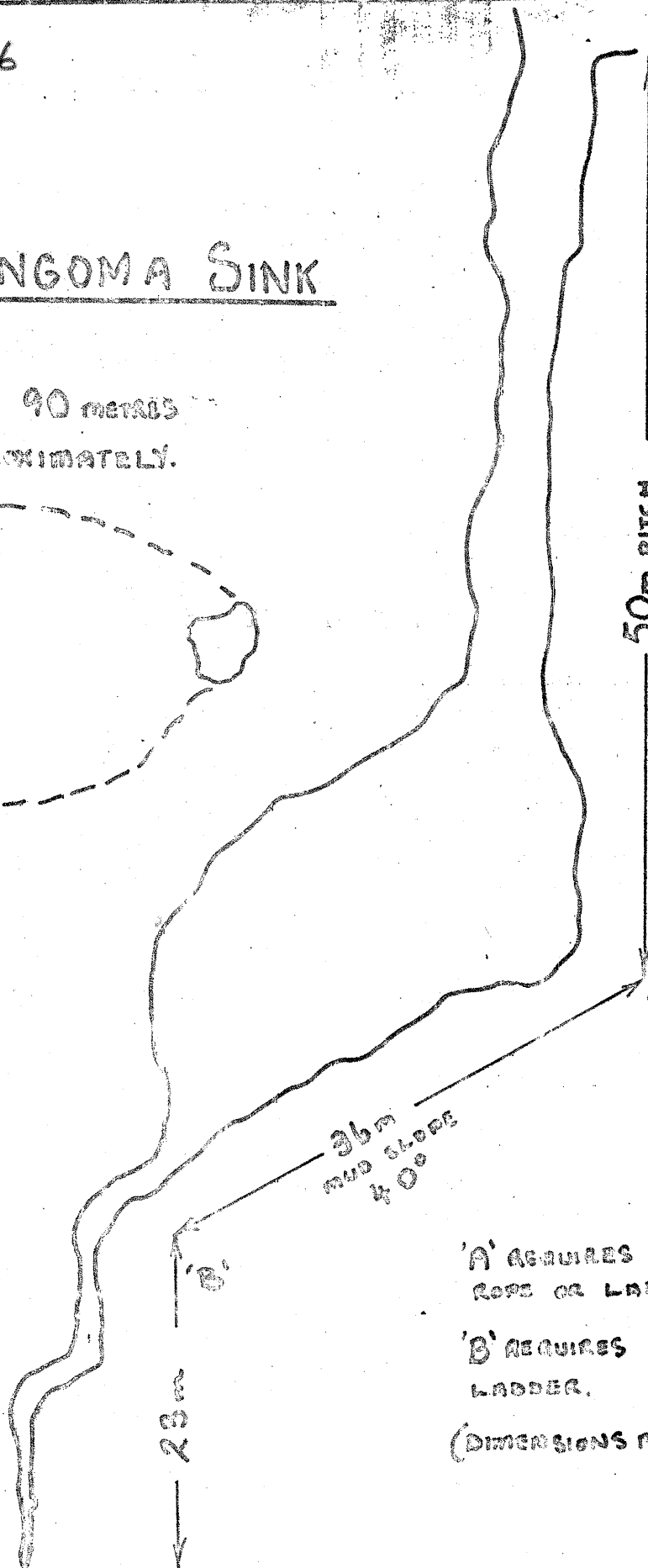
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GAGOGANGOMA SINK

DEPTH 90 METRES
APPROXIMATELY.



K. Wilde
V. Watson
May 1974.



'A' REQUIRES 50m OF
ROPE OR LADDER.

'B' REQUIRES 15m OF
LADDER.

(DIMENSIONS APPROXIMATE)

OBONDO'YONAMINGE CAVE, CHIMBU DISTRICT

K. A. Wilde *

LOCATION. Approximately 1 km north of Pari Rest House. Cave No. 9. See locality map, Niugini Caver 1(1):3.

HISTORY. Used as a burial cave for many generations by many clans including the Gena, Naragu, Endegu, Yongamugl, Kewandagu and Ubanagu clans. The name Obondo'Yonaminge translated from the Kuman language means Ubondo' (name of tarn in area) and persons deceased from disease. The cave was used only to dispose of dead that died of disease, sorcerers or unwanted persons. Most recent burial was of an aged woman in 1965-66. There are some artifacts on some of the corpses. The locals believe that it is the source of a freshwater spring called turu (Disproved).

EXPLORATION. K. A. Wilde October 1971. The entrance is 3 m long and 0.5 m high, which leads into a chamber 6 m by 6 m with a 3 m high ceiling. The area in the main burial chamber contains a large number of skeletons and some corpses with flesh still remaining. There is a hole in the far wall which divides, rejoins and slopes downwards for about 3 m at 80° to squeeze which leads into a minor chamber through the ceiling. There is a 4 m climb to the floor where there is a rift about 0.5 m wide and 5 m deep which does not go.

SUMMARY. As a cave it is not worth further exploration but is definitely of archeological interest. The cave has an unbelievable atmosphere and a visit is of definite value.

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SIGEWAGI CAVE, CHIMBU GORGE, CHIMBU DISTRICT

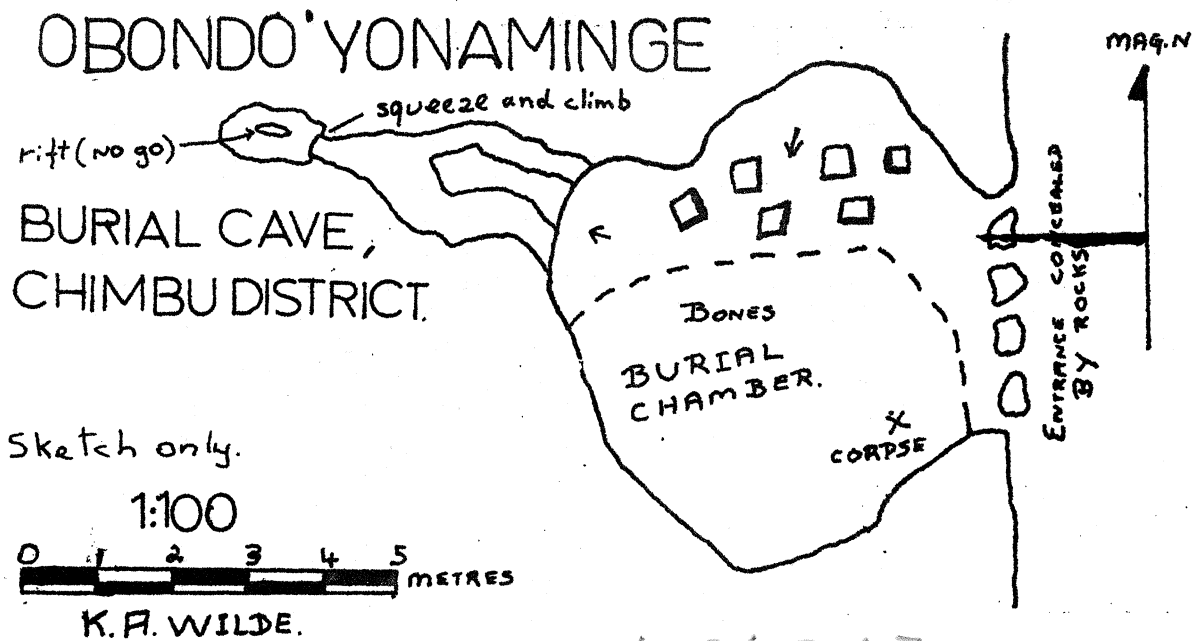
K. A. Wilde *

LOCATION. Cave No. 2 on locality map Niugini Caver 1(1):3. In Chimbu Gorge near junction of the Chimbu and Singa Rivers, Kundiawa.

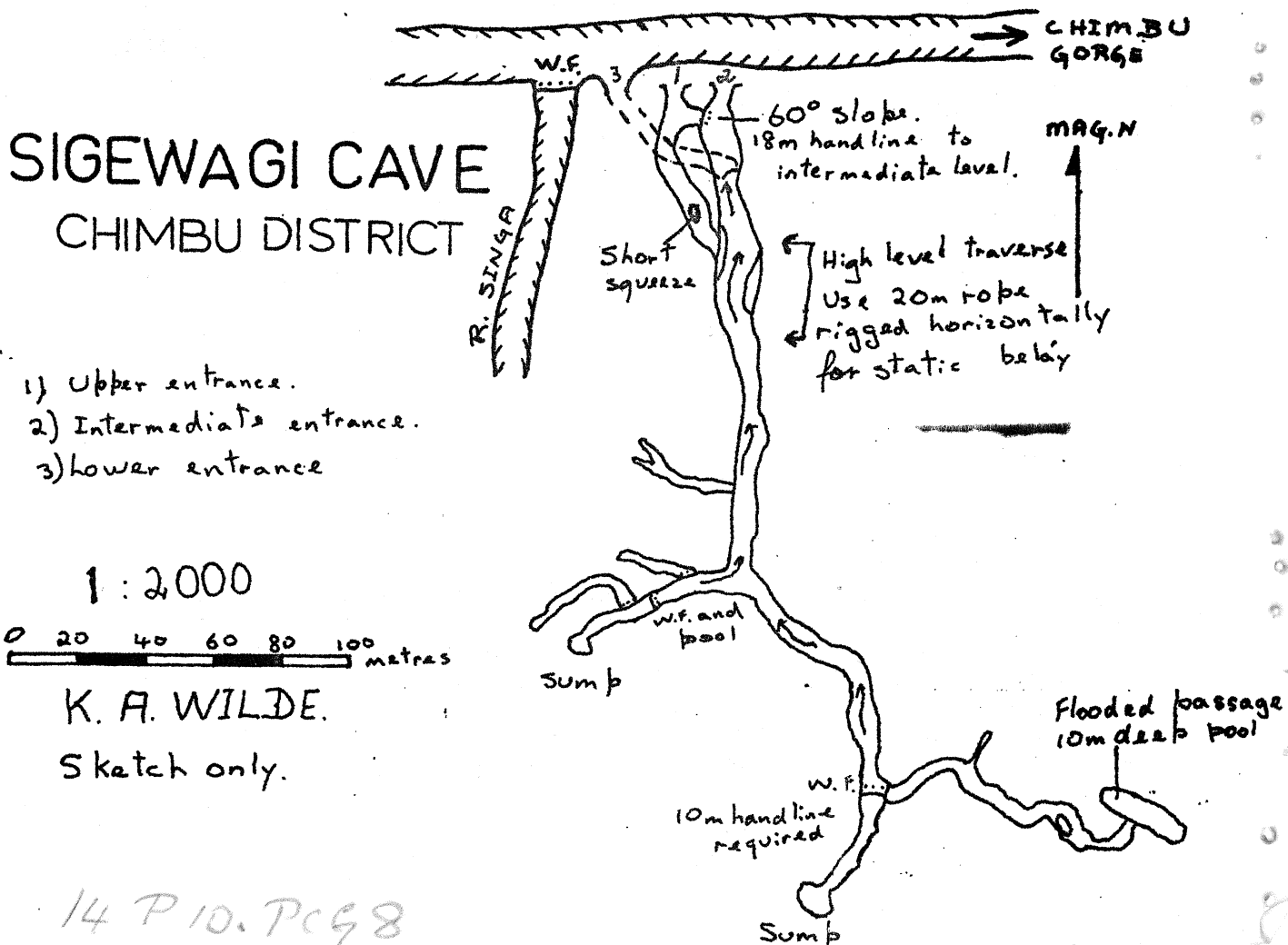
HISTORY. First recorded by F. Parker in 1964 who did not carry out an exploration owing to the ten dangerous access to the entrance. Known by locals for many years, who enter the system to the point where the stream passage divides.

EXPLORATION. Carried out in October 1972 by K. A. Wilde, V. Watson, T. Maddern and B. Sanders. Entrance may be gained at two levels (upper or intermediate); however, entrance is best gained by the upper level through a dry and dead passage that leads to a short squeeze and a high

* c/o Police Station, Boreina, Central District.



14 P 6. P 67



14 P 10. P 68

level traverse, above the river, for about 18 m. (See 1 and 2 on sketch.) There is also an entrance in the lower level. (See 3 on sketch.) It is, however, advised not to attempt entrance from this point; at this stage the stream passage is narrow and the water is fast. The stream then gushes out into the Chimbu River. The traverse is followed by a squeeze through a hole in the cave wall (alternatively, this may also be traversed.) There is then an upward slope into an old stream passage which then slopes downwards at about 20° towards the stream passage. The stream passage is then followed to where it divides, the west fork leading to a small waterfall and a sump. The passage has two other minor passages leading off which do not go.

The main stream passage continues to another waterfall with a 10 m climb where a handline may be used. The stream enters from a sump and above the waterfall is an upper level that leads to a flooded passage with a 10 m deep pool.

Halfway along the stream passage in the lower level on the west side is another passage which does not go. Access is up old flowstone. The intermediate level of the cave is dry and dead and the stream passage does not seem accessible from this level except where the stream flows beneath the floor and into the Chimbu Gorge. Access to the higher level is up a 60° slope on the west side, and a hand-line is best used.

SUMMARY. The cave is of no further interest except for the beauty of the flooded passage and the access which the cave affords to the Chimbu Gorge by climbing from the upper level to the intermediate level.

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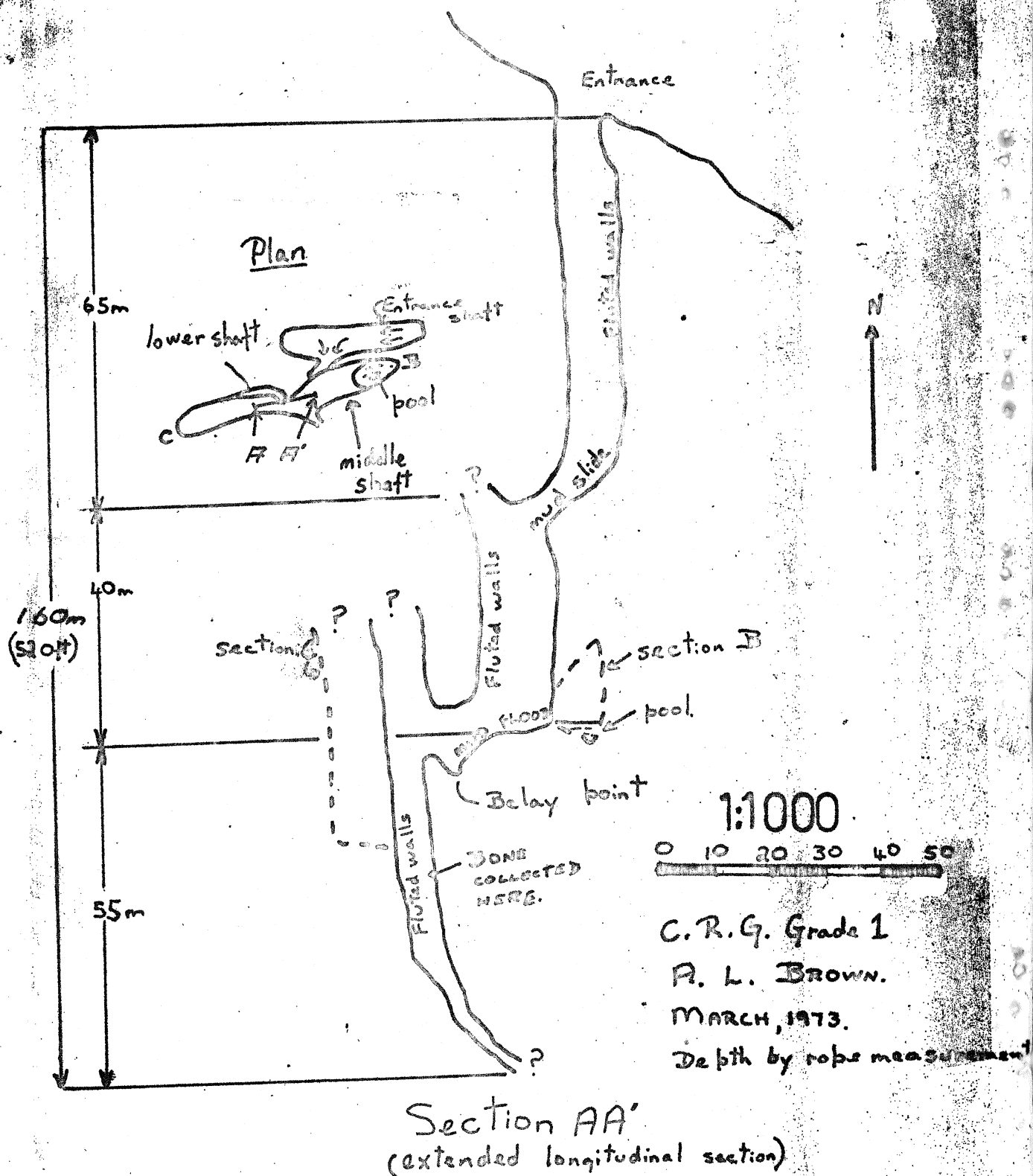
MEBILE CAVE, CHIMBU DISTRICT

Bill Sanders *

HISTORY. First entered about 1964 by the Kiap, Ag. Officer and Lutheran Missionary from Gembogl, who lowered themselves on an old hawser down as far as the mud slide. They had the assistance of the local people who lowered them down. The villagers decided after pulling one of the party half way out, they'd had enough! They eventually got home. Lex Brown and Bill Sanders visited the cave on 4th March 1973.

* Sub-district Office, Kundiawa, Chimbu District.

MEBILE CAVE, CHIMBU DIST.



14 P27, UQ3

LOCATION. In Upper Chimbu Sub-district, near Duglpagl village, half an hour's walk from the Kundiawa-Gembogl Road. Elevation about 2000 m, with Chimbu River 300 m below where multiple effluxes are reported to occur. (One hour's drive from Kundiawa on strictly 4-wheel drive vehicle.)

THE CAVE. Entrance is in a coffee garden. (Suggest that owner's permission be obtained for those who want to push this cave.) It is muddy with overhung vegetation, and is approximately 10 m by 2 m in plan. Initial pitch 64 m down vertical shaft with flutings nearly the full length. Each fluting measures approximately 30 cm across. Mud on the first stage and a mud slide at the bottom where a 50 m terylene was attached to the first 70 m terylene. Down the mud slide and over a rock jam with minimal formations the remainder of the descent. A bit more water. Down 41 m with mud and some debris. To one side a clear rock pool with no flowing water. Opposite side and down through more mud and another rock jam set in clay. Walls all damp smooth rock. The ceiling not visible in the electrics used.

Belayed 36 m nylon and over. Ceiling again out of sight. Hole descent only about 1/3 of the actual width of the shaft at the belay point.

Came to the end of the rope with about 18 m still below where the shaft angled off. Rested and discovered a dubious type of human jaw bone which Lex Brown has taken to Brisbane for identification. Attached a 6 m ladder to the 36 m nylon and down to full length of available equipment at 146 m.

As there were only two of us we decided to call it a day at this point. The far wall at the floor level could not be seen, so whether the cave goes or not is uncertain. We'd been down two and a half hours and it took another two and a half to get back to the surface.

There is a possibility that the shaft continues. There is a rumour that noises from the river have been heard at the entrance - so worth investigation. Another large entrance occurs just above the roadway and is readily visible from it, but is reported to have only a very short length of passage.

EQUIPMENT. 11 mm terylene - 50 m and 70 m; No. 4 nylon; break bar racks, jumars and cloggers. (150 m of rope required - could be descended on a ladder.)

Lex Brown has also described the cave in a trip report entitled "Mebile Cave" in Down Under 12(1):22-24. Newsletter of the University of Queensland Speleological Society.

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