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PROCEEDINGS OF THE OXFORD UNIVERSITY CAVE CLUB NUMBER FIVE

JANUARY 1970

## PROCEEDING FORWARD

G.C.COX.

The proceedings is now firmly established as an occasional publication. There can be little doubt that it is better as such than as an annual report of the Club's activities. Accounts of the umpteenth Freshmen's Meet to Swildon's may be amusing to those who took part, but are of no interest to anyone else. It is 3½ years since the last Proceedings appeared and this is the largest and most varied issue ever - as well as articles about caving in Spain, North America and Yorkshire it contains a short story about caving in France and a crossword about caving everywhere. Included are the full report of the Club's 1969 expedition, the report of the 1968 mini-expedition, and a geological article based on the 1967 expedition. (The main report of the 1967 expedition is still available from OUCC at 4 Keble Road Oxford.) It is impossible to predict when Proc. OUCC No.6 will appear, but I think I can safely say that it will not be soon, and also that it will be worth waiting for. I hope that those who have waited 3 years and 8 months will feel the same way about this issue. Let us proceed . . . .

## CONTENTS



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# EXPEDITION TO NORTHERN SPAIN 1968

Guy Cox

We had originally intended to go to Czechoslovakia. However, things were getting bad in Czechoslovakia in August 1968, and the expedition - a joint Oxford-Reading undertaking - split up. Half went to Czechoslovakia, and had to leave hurriedly.. Three of us - Dick Hazelwood, Francis Sanders and myself - went to Spain instead. We had no fixed objective, but we did intend to use the mobility we gained by being a small group and perhaps find some new caving areas.

Our first stop was at Islares, near our old haunts around Castro Urdiales. Across the Ria de Oriñon estuary from the Arenillas-Islares campsite is the village of Oriñon. This is the site of a cave which we had heard of but never investig - ated, the Fuente de Oriñon. The actual Fuente (spring) is on the hillside just outside the village, and a few feet higher up is a cave entrance. This leads into the upper levels of a large chamber, at the bottom of which is the stream. The stream runs through a series of chambers, sumping in between them, but they are also connected at high level, and one does not need to descend to stream level at all in this part of the cave.

The first chamber had been much visited - for various purposes.- and was rather sordid. After this, though, the cave was unspoilt, and it was obvious that most of the visitors had been speleologists. Eventually the high-level route ended abruptly, in a 5m. pitch. We descended, and followed the stream. This very shortly became a deep canal, and it was obvious that we would have to swim. Here the previous cavers had marked the end of their exploration, and a final survey station. Deep water, as so often in Spain, had daunted them. At first it daunted us too, as we were not wearing wet-suits. After a little hesitation, though, we plunged in and after a short

swim found ourselves in a large sandy chamber. This was completely virgin, and we entered it with high hopes. Unfortunately, at the far end of the chamber the stream disappeared in a large sump, and all high-level passages were blocked. Swimming back we discovered a fascinating passage, apparently a wet oxbow. The water in it was at least 2½m. deep; the roof was about 1½m. above water level, and hanging from the roof into the water were hundreds of large stalactites. Swimming among, and ducking under, these closely packed stalactites was a fascinating experience. It was no good clutching at them for support - they broke off, and one found oneself trying to swim in deep water holding 30-40 lbs. of calcite. After about 30m. this eerie passage was blocked by a stalactite barrier which we had no means of breaking, although we could see the passage continuing beyond. The existence of this passage can only plausibly be explained by a rise in water level relatively recently in the cave's history.

After a few days, the weather turned bad at the coast, and we moved inland, to the village of Quisicedo, near the Pantano del Ebro, and also near to the Ojo Guareña, the largest cave system in Spain. We made attempts at various parts of the system: the Ojo Guareña proper, where the stream sinks, which is a network of blocked passages, the Sima Dolencia, a large and spectacular shaft on the plateau above, which leads into the main system, although we did not penetrate very far. We also visited a pothole some 3km. away, which we later found was also part of the system, being near the resurgence. This we nicknamed 'Dead Dog Pot', since there was the corpse of a dog in the entrance passage. When we descended we felt inclined to revise the name - there was a much wider variety of dead animals!

We learnt that in ten days a large Spanish speleological expedition was to visit the Ojo Guareña, so we decided to

return to the area then, and booked in advance at the inn in which we were staying. Our next port of call was the remote hamlet of Cardaño Arriba, at the foot of Espiguete, the highest mountain, apart from the Picos de Europa, in the Cantabrians. We spemt a very enjoyable day climbing Espiguete, but speleologically the area was less fruitful. Near Cardaño Abajo was a large dry cave, which had been visited by many youth-organization parties, and spoiled of any beauty it might once have possessed. Just above this, on the road to Cardaño Arriba, was a resurgence. Our hopes were raised when we found a way through the entrance boulder choke and found ourselves in a large passage containing deep water. After about 20m. though, this ended in a sump.

From Espiguete a chain of mishaps, involving a punctured patrol tank and the illness of one of the party, brought us by chance to the campsite at Barro, near Llanes. So we stumbled on what was to prove a most fruitful area. Our most important discovery in the area was the Cueva de Bolugo. We had time only for one short trip, with very little tackle, down the cave before it was time to leave for Quisicedo again, to meet the Spanish cavers.

We returned to the Ojo Guareña to find the water-meadows below the cave a scene of organized but inefficient activity. A large number of Spanish cavers were there, and apparently even more had failed to turn up. We met some old friends, and made more new ones, but to our disappointment they were adamant that, for political reasons, we could not accompany them down the Ojo Guareña. Instead they recommended a cave at Escalada, in the Ebro gorge. This was apparently a very hard three-day trip, requiring boats, camping gear, etc.

The mayor af Escalada showed us a survey of the cave, which he kept in his office, and explained how to find the

entrance. His instructions were not easy to follow, but we did eventually find the cave. The entrance series consisted of an Agen Allwedd type passage, in which one constantly had to change height. After 20 minutes of this we reached a chamber - and the Spaniards' first campsite! From here the passage was spacious and sandy, with deep muddy lakes at intervals, leading to a final series of boulder chambers (by which time the stream had been lost) followed by a long, blind crawl. The entire trip, in and out, took us 1½ hours. However, if we had had to carry boats, camping and cooking gear and food it would doubtless have taken at least three days!

Near the Ebro gorge we also noted, but did not explore, an influent cave entrance. This, we discovered, was already known to the Spaniards. After three days in Quisicedo we set off to Barro again, for a further attempt at the Cueva de Bolugo. This was not to be, however, for torrential rain flooded the cave. Instead, we looked at the flood resurgence at Calduenin, a small cave of no great interest at Debodes, and various other sinks and resurgences in the neighbourhood. Full descriptions of the major caves in the area are given in the report of the 1969 expedition. Then it was time to return to England. We took a roundabout route to Le Havre, taking in on the way the Gouffre de Padirac - an expensive show cave, but well worth it.

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# REPORT OF OUCC EXPEDITION TO SPAIN, 1969.

## PERSONNEL

A.G. Brooks
G.C.Cox
J. Davies.
G.J.M.Dare
F.E.T.Sanders
Mrs. C.M.C.Sanders
J.G.Sheppard

## THE EXPEDITION

On the evening of August 26th. 1969, 5 people - Francis Sanders, Jim Sheppard, Geoff Dare, Jon Davies and Guy Cox - left Oxford in the Sanders' Land-Rover, with equipment in a trailer bought by the expedition. In spite of sundry minor troubles we arrived in Southampton with time in hand. Here we were joined by Andrew Brooks, and left on the night boat to Le Havre.

We drove down through France, picking up Christiane Sanders, the seventh member of the expedition, in Le Mans. On the 29th. we crossed into Spain at the Col de Somport. From there we drove down the Mediterranean coast to Murcia, then inland to the little village of El Sabinar, near Nerpio, where we met Dr. Michael Walker, senior member of OUCC.

He was leading an entirely separate archaeological expedition to the area, investigating rock-shelters in which (inter alia) cave paintings had been found. In exchange for a contribution to our petrol expenses, we were to join forces with Dr. Walker's expedition for a week, and search for caves containing paintings. In the event, many of Mike's personnel had left by the time we arrived, and he and the remainder left soon after, so we were on our own for most of the time. Unfortunately, the area proved to be totally barren of true caves, though full of rock-shelters (abandoned meanders at high

level in river gorges). We were therefore somewhat disappointed by the 6th. September, when we left El Sabinar for our usual stamping grounds in the Cantabrians.

On the 8th. we set up camp at Barro, near Llanes, and our work in the area is detailed in the following pages. We were concerned with the Sierra de Cuera, a fairly low (up to 1,200m.) range seaward (north) of the much higher Picos de Europa. The two ranges are separated by a valley which descends almost to sea-level. The Sierra de Cuera is formed of Urgonian (Cretaceous) limestones, whereas the Picos consist of Carboniferous limestones, which our past experience had suggested were less rich in caves.

We were not disappointed in our choice of area. We were, however, somewhat disappointed by the weather, which was extremely wet and flooded not only the caves but also our campsite. In spite of this, a lot of worthwhile work was done, and the area will well justify a further visit. We left Barro on Sept.26th., spent one night at Castro Urdiales (scene of two previous OUCC expeditions) and then came back through France to Le Havre. We arrived back in England on Sept. 30th.

## CAVES EXPLORED

(Grid references on the 1:50,000 Military map, sheets 31 & 32)

| | |
|---|---|
| Cueva de Bolugo - - - | 5058 9758 |
| La Boriza (Cueva del Agua) - | 5065 9755 |
| Cueva de Caldueñin - - | 5047 9758 |
| Cortines resurgence - - | 5038 9757 |
| Pozo de Fresno - - - | 5053 9756 |
| Cueva Sin Nombre de Mere - (Cueva Geoffo) | 5005 9737 |
| Kids' Cave - - - - | 5050 9757 |
| Cueva de la Llera - - - | 5065 9816 |

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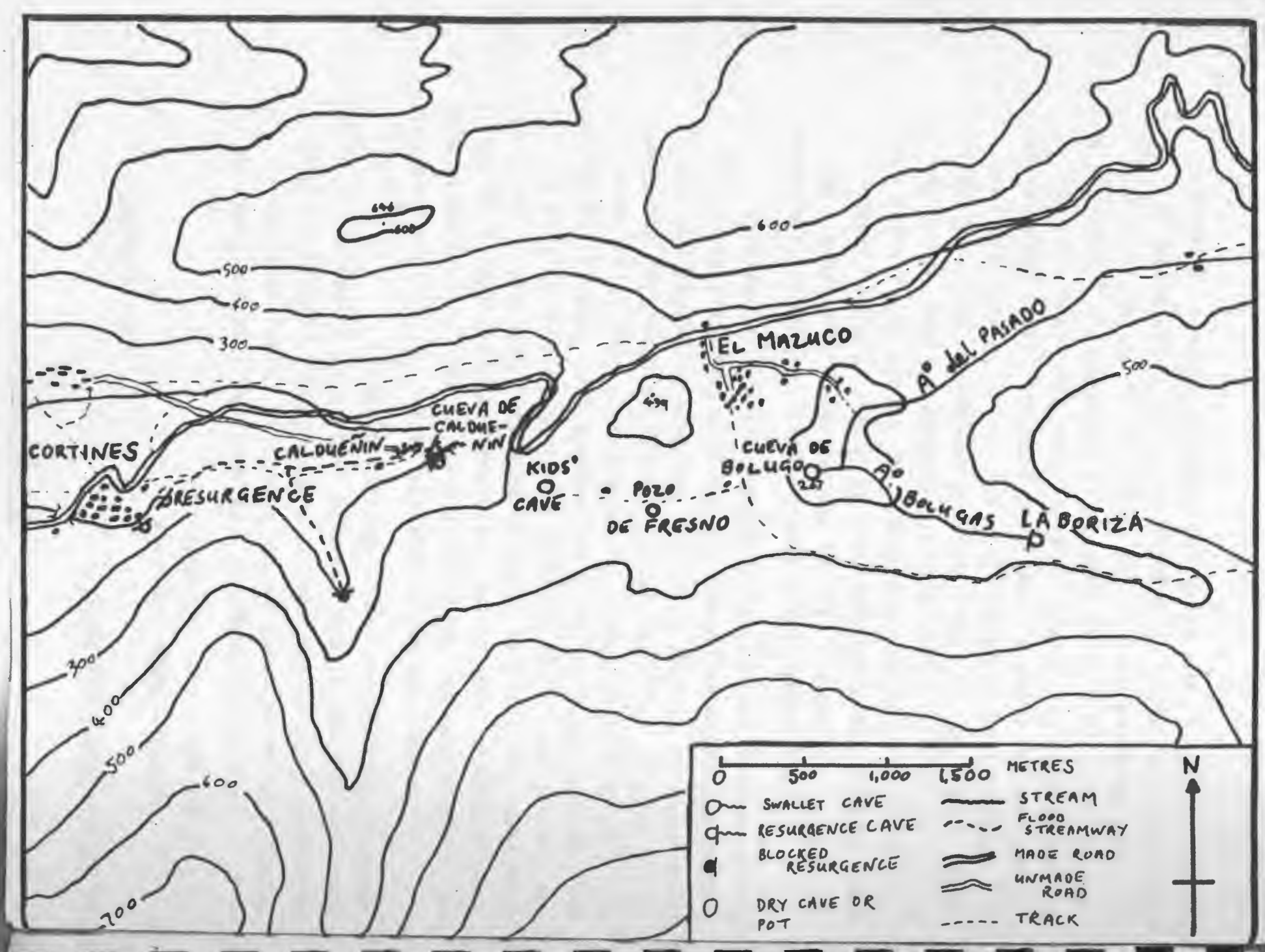

600
500
400
300
EL MAZUCO
A° del PASADO
500
CUEVA DE CALDUE-NIN
CALDUENIN
CORTINES
RESURGENCE
KIDS' CAVE
POZO DE FRESNO
CUEVA DE BOLUGO
A° BOLUGAS
LA BORIZA
300
400
500
600
700
0
500
1,000
1,500
METRES
N
SWALLET CAVE
RESURGENCE CAVE
BLOCKED RESURGENCE
DRY CAVE OR POT
STREAM
FLOOD STREAMWAY
MADE ROAD
UNMADE ROAD
TRACK

## LA BORIZA (CUEVA DEL AGUA)

J.G. SHEPPARD

Length - 400m. (approx)
Height - 60m. (v. approx.)

This is a resurgence cave upstream from the Cueva de Bolugo. It is situated at the foot of a large, heavily vegetated cliff at the end of a dry hanging valley. A medium sized stream, one of the two main feeders of Bolugo, flows from the cave; this is the Arroyo Bolugas proper.

The cave was fully explored over a period of a week or so, about 5 separate trips being made in all. All of these were made in more or less flood conditions, as water levels in the area were, according to local information, abnormally high for the time of year. The entrance is about 10 m. high, and a wade of 20m. leads to the first cascade (2m) immediately followed by a second cascade (3m.). An alternative high level route in the roof to above the second cascade is possible, but there is no means of descent back into the stream passage and the rock is extremely slippery. On the roof and walls above the second cascade some rather beautiful moths were observed.

A fine meandering stream passage then leads to a large wet chamber, which can also be reached via a dry oxbow. The water enters from a passage high up in the roof, strikes a step about 5m. down and the sprays out in all directions, so that it is impossible to keep dry anywhere within 4m. of the pitch. Owing to all this water the chamber is extremely noisy, and communication is difficult. A climb up to the left into the roof of the chamber leads into a bedding plane which seems to lead back to the stream passage above the pitch, but the crawl closes down so much that it is impassable. A traverse to the right appeared more likely to go, so we attempted it and after about two hours of pegging and a few hairy moves we reached the top of the pitch and rigged a ladder. If hung

straight down, tha ladder would have given an extremely wet pitch, so we clipped it to the pegs in the traverse and used it as a handline cum footrail.

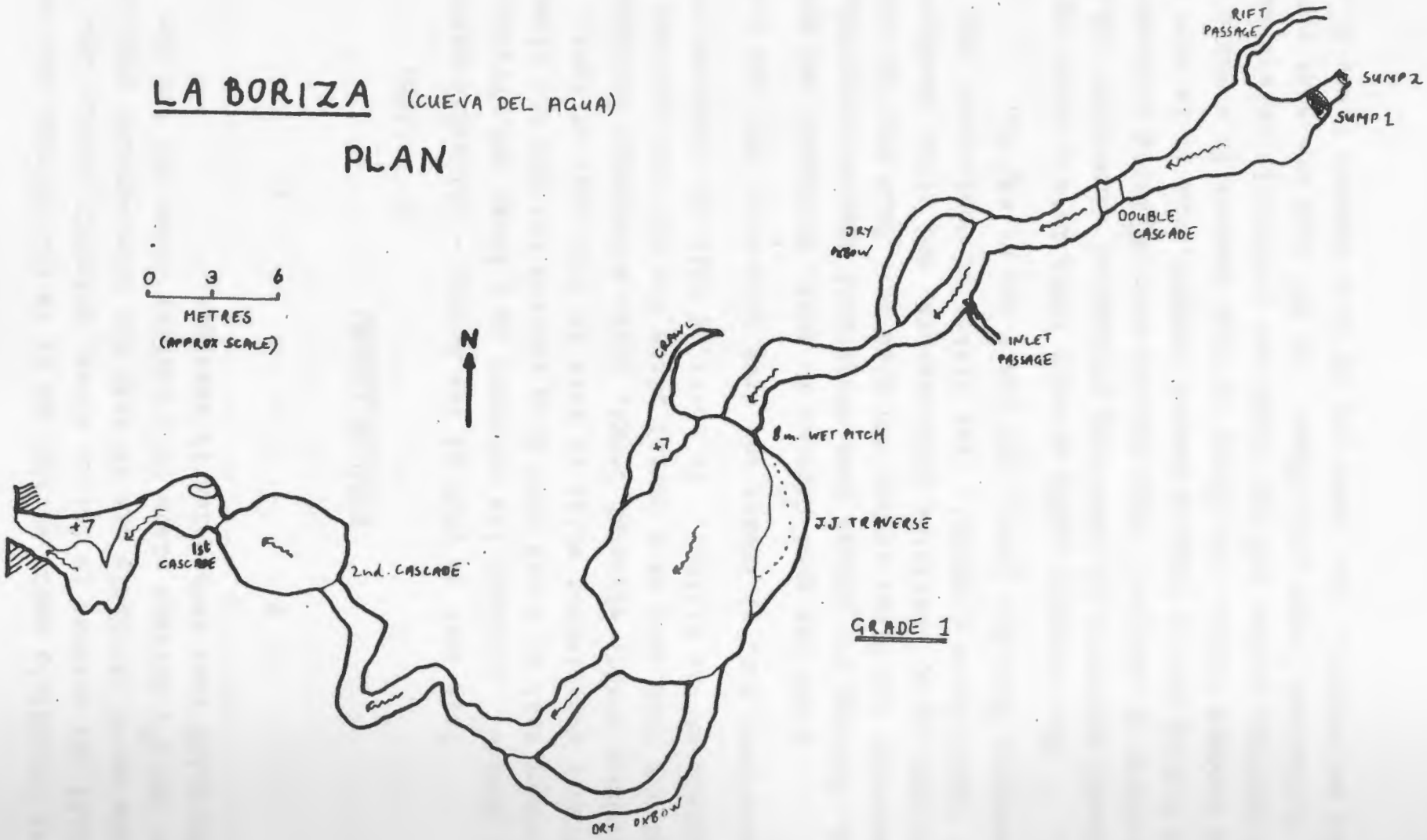
The stream passage above the pitch is smaller than that below, and the water deeper. A twisting passage full of deep holes, some of which require swimming across, leads to a double cascade after about 70m. There several dry passages leading off in the roof, but all of these turned out to be oxbows. A small inlet passage was found to be impenetrable. The stream passage is almost completely devoid of formations, apart from occasional stal flows, and this was found to be the case in the rest of the cave as well. The rock itself, however, is quite interesting, ranging in colour from black to light brown with many quartz veins in it.

The double cascade (7m.), the last part of which is vertical and only just climbable, then leads to the final part of the cave. The passage widens considerably above the cascade, the stream gradually deepens and after about 40m. sumps. We free-dived the sump as it was only about ½m. long, and found ourselves in a large airbell (5m). The second sump was not attempted, as we could not feel an airspace on the other side. The water in the sumps is superbly clear, and it is possible to stand on one side of the first sump and see the feet of the person on the other side. An exceedingly rare occurrence in British caves!

Coming back after diving the sump a wet passage off to the left was noticed. "Aha, a sump bypass!" we thought, but no such luck. The passage goes up and along in the right direction, first over shingly sand and then mud, but finally degenerates into a three-dimensional maze of passages which all close down and are impenetrable. A very strong cold draught blows through all this passage, and at the extreme end the

# LA BORIZA (CUEVA DEL AGUA)

## PLAN




GRADE 1

air definitely smelt earthy, so it is our opinion that at this point the surface is fairly close, possibly within 10m. or so. This would certainly fit in with our above-ground observations, as the A°. Bolugas sinks in a boulder choke not too far above the cliff face from which it resurges.

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## POZO DE FRESNO

J. DAVIES.

This cave is part of the Bolugo - Caldueñin system at El Mazuco. Although its entrance is a large and obvious shaft, I doubt that it would have been entered but for the dismal weather experienced while we were in this part of Spain. The entrance shaft, although large, looks singularly unpromising and has been used as a burial place for all the nastiest dead animals of the village. In spite of this Jim Sheppard and I threw down 20m. of ladder and drew lots as to who was to descend.

I had the good fortune to lose, descended the shaft and, finding the refuse less unpleasant than anticipated, inspected the first of the two ways on. This was the route followed by my unwitting predecessors, and leads immediately to 'Spare Parts Chamber'. The litter of bones made this a strangely desolate place, and there was no way on.

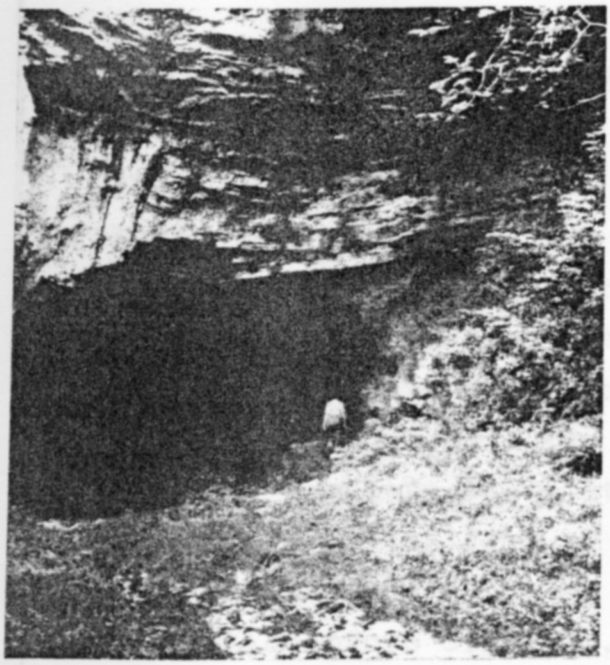
The opposite route quickly leads into a large dry passage decorated by crumbling stalagmite formations and a frosting of calcite. This passage soon collects a minute stream and widens into a bagpipe shaped chamber, and it is here that the wonders begin. The floor of this chamber is a whole series of rimstone pools, and the walls are tastefully embellished by occasional large stal flows. On the roof are some very fine helictites. The lower end of this chamber leads to the

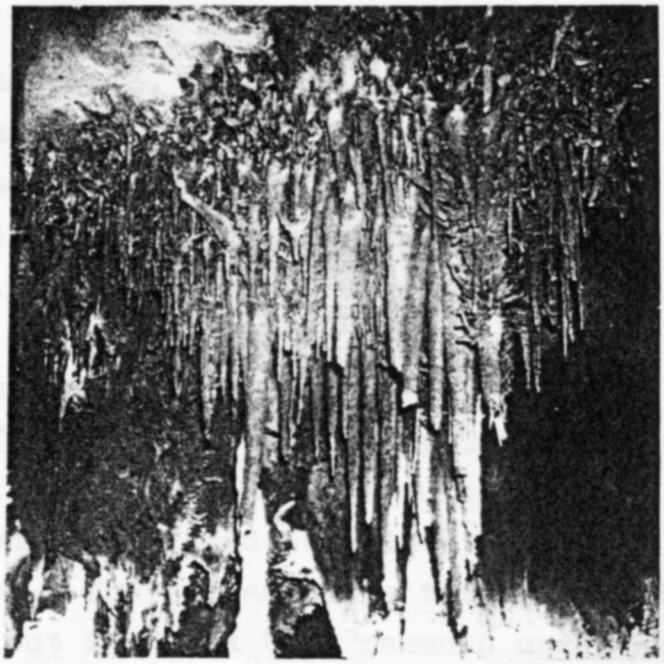
10m. pitch into the main chamber.

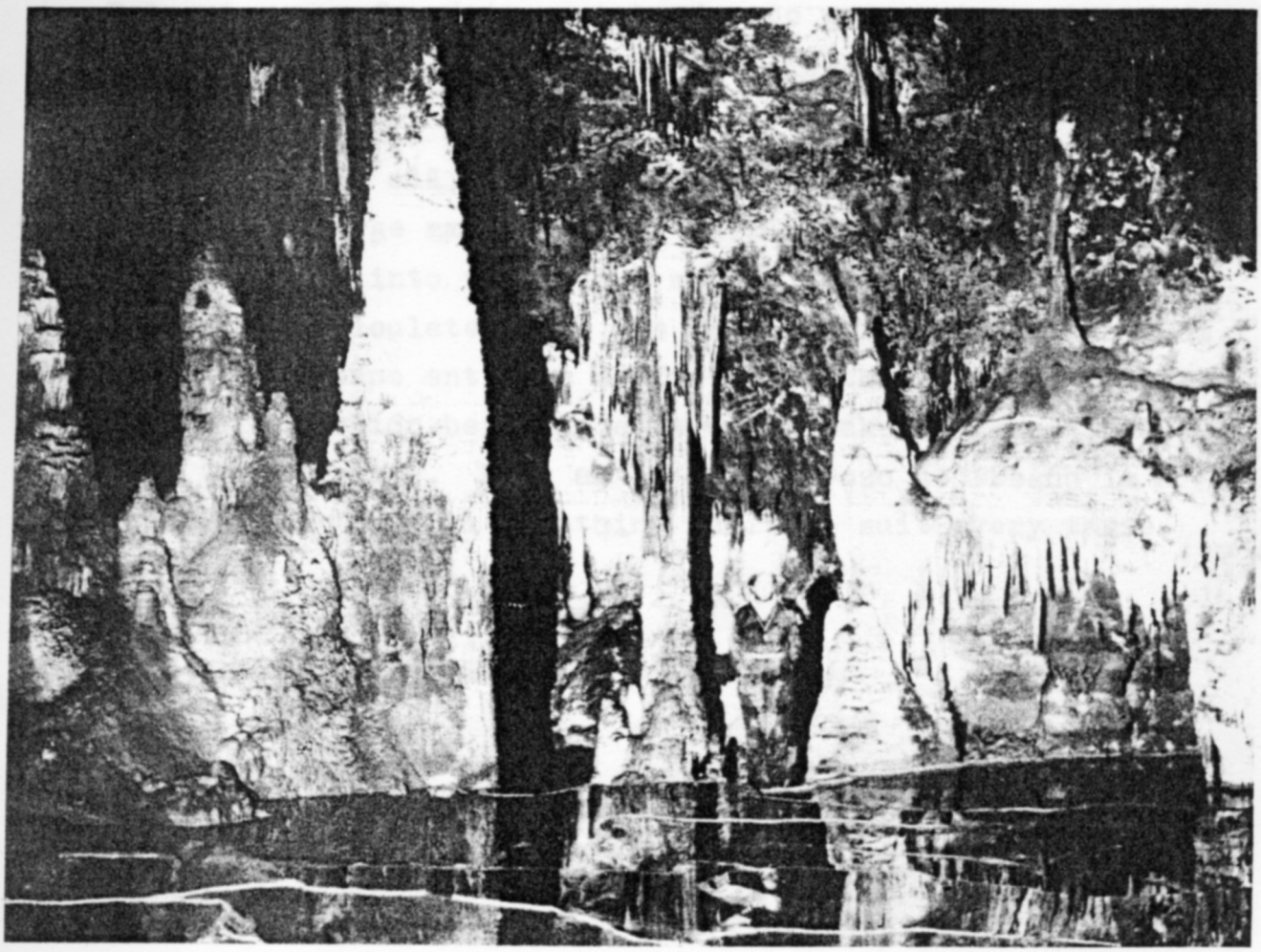
This pitch is curtained off by a colonnade of stalactites, and this shields a truly wonderful vista. Towering up into the vastness of this chamber is a row of immense stalagmites, like a row of distillation columns in an oil refinery, the largest being some 12m. tall. Yet they seem almost to be lost, as the walls and roof remain out of sight. The floor of the chamber consists entirely of calcite, brown and dead in parts, but on the whole clean, white and glistening. As in the chamber above, the walls are only occasionally decorated, and the head of the chamber is curtained off by a stalactite colonnade. Giant stalactites hang from the roof; they can be seen from the top of the pitch but are more or less out of sight from the bottom. A steep stalagmite slope leads to a lower part of the main chamber; on climbing down we found that the water sinks through a mud floor and all possible ways on are blocked.

This lower chamber runs almost parallel to the upper main chamber, and is older and more decayed. One has to climb over boulder falls, and old stal flows, until eventually it peters out completely, once again behind a stalactite curtain. This is obviously the oldest part of the cave as it lacks the vitality of the other parts of the system.

Leading from the entrance series is a second route, which spirals downwards to a final depth of some 140m. A short crawl leads to a 7m. pitch, beyond which the way bifurcates. One route leads to a pitch into the lower main chamber, while the other leads, via a rope pitch, into a small chamber. From this a magnificent 15m. pitch hangs free into the centre of a pear shaped chamber, where a small stream is met. A steep stal slope, which needs a rope, leads to the head of a 35m. pitch.







Top L. Cueva de Caldueñin. Top R.& Bottom Pozo de Fresno.

This we called Möbius pitch, because of the strange manner in which the ladder hangs. On the lower half of the pitch one climbs with ones back to the wall in a veritable shower bath of water. The exit from this aven was blocked by a stalagmite barrier, which quickly succumbed to the hammer, but within a few metres the passage was again impeded, this time by a boulder, well cemented in with calcite. After a vain attempt to remove it, Jim Sheppard and I wriggled through the small gap left above it. We soon reached a further 12m. pitch, at the foot of which we found ourselves in a small chamber, with no way on. The stream sinks through boulders, which might prove diggable, but it would be a mammoth undertaking. Returning, we found it much harder to get past the boulder in an upward direction, and we therefore named it the Schottky Barrier.

All in all, this route formed a most satisfying trip, and used a large amount of our tackle, but it was a pity that a way through into the Bolugo master system could not be found. We calculate that the master stream runs some 200m. below the Fresno entrance shaft, so in the unlikely event of the connection being made it would make an exceptionally fine through trip. Even as it is, El Pozo de Fresno is a very fine cave, with something in it to suit every taste.

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# CUEVA DE BOLUGO

G.J.M.DARE

This cave, familiarly known to the expedition as the Pozo del Caballero, lies in an ideal site for a cave, at the very bottom of a deep blocked valley, providing the only outlet for a very considerable stream which flows into it from the Sierra de Cuera to the west. This stream proved to be an insurmountable obstacle to a thorough exploration of the cave, for the persistently inclement weather swelled it to a size which would have made the re-ascent hazardous if not impossible. Part of the stream is used to run a primitive hydro-electric installation in the cave entrance, supplying El Mazuco with lighting.

The location of the cave, below El Mazuco, was already known, for it had been discovered by the 1968 expedition, which had not had time to explore it fully. Consequently it was one of our first objectives. A preliminary reconnaissance made it plain that only a limited trip down would be possible; however, Jim Sheppard and myself, followed by Jon Davies, went as far as the top of the fourth pitch. The entrance pitch is some 15 metres, from beneath the natural arch of the cave down into a deep pool, clearly visible from the surface. It is then necessary to swim across to a narrow submerged ledge in order to untie the lifeline; the passage then consists of a series of small cascades alternating with deep pools which must be swum through. The second and third pitches were little more than steep water chutes, made impassable by the force of the stream. By climbing up to the left suitable rock formations were found on each pitch for hanging a ladder, so that the ladder hung away from the water. This made both take-offs slightly tricky, however. The passage between the third and fourth pitches was notable for a large

tree-stump tightly lodged at the top of a cascade - we later made use of this as a belaying point.

The fourth pitch was exceedingly wet, being a sheer waterfall of some 7 metres, and on this preliminary exploration we decided not to continue further. We optimistically believed that the stream would quickly subside to its normal summer level, a mere trickle; we therefore left the ladders for the second and third pitches on their belays, hung up away from the stream, and came out.

Torrential rain then fell, and the cave was soon in full flood. It was not until the very end of our stay in Spain that we were able to enter the cave again: if nothing else, we wanted our tackle back! A four man party made the descent, comprising Guy Cox, Andy Brooks, Jim Sheppard and myself. We negotiated the first three pitches with comparative ease, and at the top of the fourth we rested to take stock. Jim Sheppard belayed the ladder slightly to the right of the pitch and, with Guy Cox acting as lifeliner, made the descent, Andy and I followed.

As with all the other pitches, the ladder fell into a deep pool, and it was necessary to swim away to the next lip. Immediately we came upon another pitch, a mere three metres deep but with quite a complicated climb around a rock pillar, the belay for the ladder being on the right hand side, on the near side of the pillar. Beyond this fifth pitch was a short passage ending in a long angled pitch. After a long fruitless search we eventually used a belay point high up on the right hand side. Immediately after this, however, was a seventh pitch, with no possibility of a dry belay. The volume of water made it impossible to climb in the waterfall, so here we had to halt.

In drier weather it should be possible to penetrate much further. The cave, as far as we have penetrated, runs more or less due east - directly away from its resurgence. At some point, therefore, it must reverse its direction. The flood resurgence at Calduenin, 90m. below, terminates upstream and down in a sump. The stream-passage from here to the Vauclusian rising at Cortines has a gentle slope - 50m in in 1 km.- and is probably mostly flooded. It seems likely, therefore that the cave will to descend steeply eastward, following the dip of the rock, until something approaching the -60m. mark is reached, and then turn westward, having a more or less level passage, possibly frequently sumping.

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## OTHER CAVES IN THE A°. BOLUGAS SYSTEM

Cueva de Calduenin.

Near the village of Calduenin is a large cave entrance in a cliff, at the head of a dry valley. Water only flows from the cave entrance in exceptionally wet weather, but the main stream of the Arroyo Bolugas is met just inside, in a large chamber. The stream sumps both upstream and down, at least during the weather conditions prevailing while the expedition was there.

At the top of the cliff is a small cave containing some long-dead stalactites, obviously a long abandoned resurgence.

Cortines.

The stream resurges in a most impressive Vauslusian rising just above the village of Cortines. The roof can be felt to rise just inside, and it is possible that it might be feasible to enter in very dry weather.

Downstream is a small resurgence cave, bringing a tributary into the river. After about 20m. the cave becomes too tight for further progress, and it is almost certainly unconnected with the main system.

Kids' Cave.

This cave was shown to us by the village children (with one torch between them). It is at the western end of the saddle between El Mazuco and Caldueñin, and consists of a descending bedding plane. At first it is spacious and well decorated, but eventually it closes down and is blocked by boulders. It might repay digging.

* * *

## CAVES IN OTHER AREAS

Cueva de la Llera

Near Barro a limestone knoll stands out from the coastal plain. A stream sinks on one side of this, at Quintana, and resurges on the other. The stream actually sinks in a series of blocked sinks, but there is a penetrable cave entrance nearby. This we did not investigate, since Jim Sheppard cut his foot while crossing the stream (which was very polluted), and it was considered more advisable return so that the wound could be cleaned and dressed.

The resurgence, the Cueva de la Llera proper, is a fine cave entrance, which has been dammed to provide head for a water mill. About 30m. in the stream sumps, doubtless the effect of the dam.

Cueva sin Nombre (Mere)

This was a save by the side of the road near Mere, which a local inhabitant informed us had no name (sin nombre).

He told us that it had been explored the previous year by some English cavers; on our return to England we found that these were the Nottingham University expedition, who had given it the name of Cueva Geoffo. We were unable to penetrate into the master system, since the water level was so high as to turn their 'Duck One' into a sump.

La Borbolla

Near the village of La Borbolla is the source of the Rio de las Cabras, a very large and impressive resurgence cave. Some 20m. up the cliff above it is another entrance, in which the stream can be seen again. The underground course of the stream can be followed by a series of shake-holes and collapses, and some kilometres away a pothole gives access to the stream again. At the time of our visit, the system was in an extreme state of flood, and it was not possible to make any progress in any of these caves. It seems possible that most of the underground streamway is collapsed, but a further visit in dry weather is definitely called for.

Sierra de Cuera

The top of the Sierra de Cuera is a relatively level area of very rough karst, dotted with shakeholes which take all the drainage of the area. Several potholes appear to go to some depth, and to be worthy of exploration. The great problem, though, is the transport of tackle. There are very few paths up, and these are very steep. The karst on the top is very difficult going. The only feasible method (short of using a helicopter) would be to use mule transport. The organizational problems would be considerable, since food and camping equipment for a stay of several days would be needed.

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