

EXPEDITION CINÉ - N.W. SPAIN by Guy Cox

The Area

Oxford University Cave Club has been involved in expeditions to the Cantabrian Mountains in N.W. Spain since 1961. In 1965 many OUCC members participated in the British Speleological Expedition to the Cantabrian Mountains. Whilst on their way back to England, some members of the expedition had a look at the area inland from the small port of Castro Urdiales. They realised that the area was extremely promising, and for 1966 an expedition was planned to investigate this area. This expedition, specifically an Oxford expedition this time, on a rather smaller scale, found several cave systems, two of which were exceptionally large and fine. These were partially explored, and provisional surveys were made. It was realized that the area deserved more than this expedition, limited in both facilities and manpower, could do, and so a much more ambitious expedition was planned for 1967.

The Oxford University Expedition to Northern Spain 1967 contained a geologist, to carry out a geological survey of the area, and a zoologist to study cave fauna. We planned to finish the exploration of the caves, and to survey and photograph them. A major project also was to make a film of these cave systems, which in sheer numbers and beauty of formations, and in spaciousness, can exceed anything in Britain. The film inevitably took up most of the expedition's manpower for a large part of the time.

Castro Urdiales is a small town almost midway between Bilbao and Santander. It is a fishing port, a holiday resort, and also the market town for a large area of countryside. A mile or two inland is the village of Samano, and the caves we filmed are situated fairly near this village. We took as our base a camp site between Castro Urdiales and Santander. The Cantabrian Mountains in this area are not very high, but there is a lot of relief on a relatively small scale — the landscape is full of hills, valleys, poljes and dolines. The rainfall is very high; N.W. Spain as a whole has a high rainfall, and in this area, on the seaward side of the watershed, the rainfall is even higher. It is not surprising, therefore, that cave formation is well developed.

The Caves

The film was shot in the two great cave systems known as the Cueva de Sangazo and the Cueva de las Penes. The Cueva de Sangazo is a large resurgence cave (Fig. 1), carrying a stream of considerable size. The sink of this stream is known as the Cueva de la Penilla, and the two caves were surveyed to within a hundred feet or so of each other; it was a great disappointment to the expedition not to discover a connection. Another cave associated with the Sangazo system is the cave, discovered by the 1966 expedition, known as Sinister Pot. This carries a small tributary stream, and again it was not possible to make a connection with the main cave. Filming was carried out, however, since the entrance is a ; spectacular 90 foot fluted shaft, and the descent of this forms the opening sequences of the film. The main stream passage of Sangazo is wide and spacious, with the stream for the most part fairly shallow. Near the entrance a dam has been built by the local water board; the water is only waist deep if one keeps strictly to the edge and we had to carry all the filming equipment through it. (A high level entrance was later discovered, but by this time we had almost finished filming in Sangazo). Once through the lake it was little more than a walk as far as the Dry Oxbow, the furthest point to which filming equipment was taken. Some care was needed over boulders and around pools, but in general Sangazo cave presented no great problems in transporting equipment. The formations in the stream level of Sangazo are large and grand (Plate 1). In the upper levels, which were also filmed, the formations are smaller and closer together. Most of them are now dead and bone dry.

The Cueva de las Penes gave us greater problems in transporting equipment. The entrance is high up on a hillside. Inside, one goes down in a steep spiral, sometimes crawling, sometimes walking, with a few short, free-climbable pitches. The upper levels have been much damaged by vandals, but the lower levels are unspoiled. Eventually one comes to the main streamway. The cave has been surveyed by a Spanish group as far as the stream. However, the stream at this point is a deep canal, and to go upstream or down one has to swim. Spanish cavers tend to dislike water, and they did not attempt this swim. The main stream cave was thus completely virgin territory. (The survey, Fig. 2, does not show the downstream extension of the streamway. This is a provisional survey, made by the 1966 expedition Before the cave had been completely explored.) The cave is blocked by boulder chokes both upstream and down; it is possible, though, to reach the other side of the downstream boulder choke from the resurgence. For filming we went upstream only, since this part of the cave contains the finest formations, both in the streamway and in the final chambers.

We managed to find a traversing route upstream, which enabled some of the filming crew to keep dry. Most of the equipment, though, was floated downstream in rubber boats. The formations in Peñas were on a smaller scale than those in the Sangazo streamway, and were still wet and 'alive'. There were large numbers of straws, some of them up to 12 feet long.

Filmstock & Equipment

We had decided from the start that the film would have to be on 16 mm and in colour. After some deliberation it was decided to use Anscochrome 200 stock, since it was the fastest film then available. This has a normal speed of 200 ASA, but can be forced to 400 ASA in processing, and was so used. One snag with this film was that it was only available with daylight balance, and photoflood illumination was being used. The exposure penalty of a full correction filter would have been prohibitive, so it was decided to expose most of the film without a filter. Where some colour correction was definitely called for an Actina B 1½ filter, proved suitable and gave partial correction with only half a stop exposure penalty. The resulting colour bias was considered to be acceptable for two reasons:

- 1) the caves have a predominantly reddish coloration, caused by iron deposits,
- 2) the caver sees the scene illuminated by a carbide lamp or a Nife cell, and both of these give a very warm light.

In practice, the results justified our expectations. Certainly a reddish colour bias is preferably to a bluish one, which almost always looks totally unnatural.

Money was extremely short, and the filmstock took a large slice out of the available funds. This limited our choice when it came to lighting equipment. Professional portable battery lights would have been very useful, but the hire fee involved meant that they were completely out of the question. Instead 30 volt 275 watt photofloods were used. Three of these were used at any one time, two in reflector stands, the other in a reflector fitted with a clip. This last proved quite useful — it could be clipped on to stalagmites or stalactites where there was no level floor, or could be used actually in the field of view, concealed behind a rock or two. The lamp stands and reflectors belonged to a member of the expedition; they were brand new and unused at the beginning of the expedition, and very secondhand at the end.

For power five ex-Government 6 volt accumulators proved suitable. These were in many ways ideal for cave use — they were unspillable and had tough steel cases and convenient rubber carrying straps. They were, though, fairly heavy. The batteries were rated at 40 amp. hours, but of course gave rather less at the high rate of discharge used, giving 45 minutes of light per charge at full power. To warm up the lamps, and for focussing, the bulbs could be run with only 4 batteries in circuit. This was very successful from the point of view of prolonging the life of the bulbs, but a proper lamp series/parallel switch would have conserved the batteries better.

The batteries were taken above ground for charging, on a small ex-Government generator, which broke down halfway through the expedition; after that the batteries were charged by a garage in Castro Urdiales.

A Bell and Howell twin turret camera was used; it was fitted with an f1.9 25 mm standard lens and an f2.3 17.5 mm semi-wide-angle lens. The camera, and a tripod, were lent by St. Catherine's College Film Society.

Filming

On arrival at a filming location underground (Plate 2) the batteries were connected up to a tag board, to which the lamps were connected with heavy-duty cable and household 15 amp plugs and sockets. A large knife switch was used to control the lamps, giving off, 4 battery and 5 battery positions. The ancillary equipment, and the camera and bulbs, were carried in ammunition boxes, suitably padded where necessary.

The main factors limiting us when filming underground were lack of light and shortage of manpower. While it would have been possible for people making a film on their own territory to use more lights with the same number of batteries, this was not really feasible on an expedition. The labour involved in carrying the batteries into and out of the cave, together with the time lost while they were being charged, made it impracticable.

The amount of labour needed to carry the batteries, lamps and other equipment meant that at least eight of the ten men on the expedition were needed for each filming trip. If the going was difficult, or if extra caving equipment was carried, such as the maypole sections used in one sequence, all ten people were needed. Filming sessions had therefore to be fitted in carefully, to prevent disruption of all the expedition's

projects. In fact, the surveying was the only project to suffer from this — time did not allow the resurveying of the Cueva de las Peñas. The other major caves were surveyed, and the zoological and geological projects completed, in spite of the demands of filming.

The limitations of lighting made it difficult to film large areas. This problem was made worse by the smaller aperture of our wide-angle lens. A lot of the film had therefore to be taken in medium and close shot. Various techniques were used to overcome the problem of long shots. Where no movement was involved, the camera could be run at a slower speed. Where action was involved a useful technique was to light only certain areas in the field of view of a long shot. This gave a good impression of the cave atmosphere, but had to be used in moderation.

Another major problem of expedition filming was that no rushes could be seen until everything was finally and irrevocably in the can. Each reel of film was sent to England for processing as soon as it was exposed, to avoid deterioration of the latent image in the Spanish climate. The processed films were not, of course, sent back out to Spain. There was thus no possibility of retaking unsuccessful shots.

This inevitably meant that some second-rate shots found their way into the film, and that some sequences had to be recast when important shots were completely unusable. A further problem was that on viewing the rushes there were many cases where additional shots could be seen to be highly desirable for the construction of a sequence, and this posed further problems in editing.

Finishing Touches

After our return to England the film was edited using equipment lent by St. Catherine's College Film Society. Sound effects were recorded in two Yorkshire caves, Dow and Dowkabottom, using a hired Uher recorder. Music was used only for the opening titles and the closing sequence; the piece used was specially composed for the film. A commentary was written and recorded. Titles were shot, and superimposed on cave shots in printing. The film was given the name "First Light", and is now more or less complete. A few extra credit titles will be added shortly, and the soundtrack given some final tidying up, but apart from these minor touches the film is finished — a year and a half since we went to Spain in 1967.

March, 1969

Guy Cox,
School of Botany,
The University,
Oxford.

DISCUSSION:

Alan Coase: Could you tell us what you mean by the battery packs being very heavy?

Guy Cox: The batteries were back-packed through parts of the cave and they were really heavy. When you fell over you couldn't get up again. This was particularly unpleasant when you were wading in waist-deep water.

Mr. Riley: How much did the film cost to make?

Guy Cox: This depends on what you include as film-making costs? The batteries cost about £1 each. In total the film probably cost about £150. This covered only one print. Subsequent prints were about £40 each. The film runs for about 25 minutes, i.e. 800 feet.

R. Stenner: Could you tell us what proportion of the film shot was used in the final version?

Guy Cox: Roughly half, more by good luck than good judgement.

Bernard Woods: Was a script prepared beforehand, or was film just taken "pot-luck" and fitted together afterwards?

Guy Cox: As I had never done any caving before going on the expedition and we had very little idea of what the caves were like, the script was put together during the first week or so of the expedition and shot later on.

R. Stenner: Did you have a director separate from the camera-man?

Guy Cox: No, I had to do both jobs!

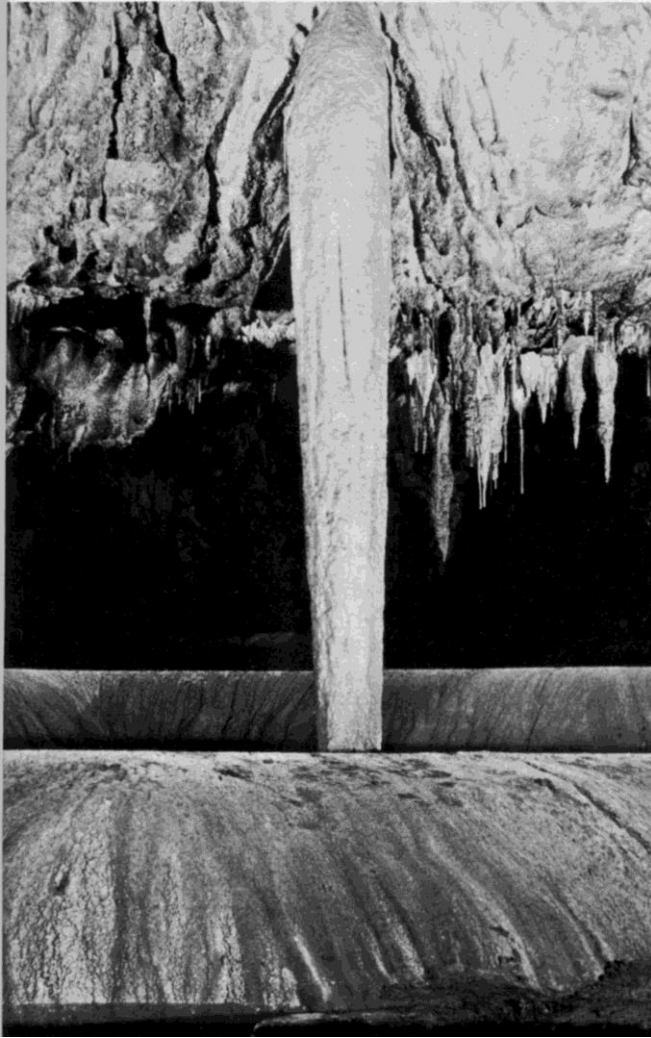


Fig 1 Cueva de Sangazo: gours and stalactites in the Dry Oxbow

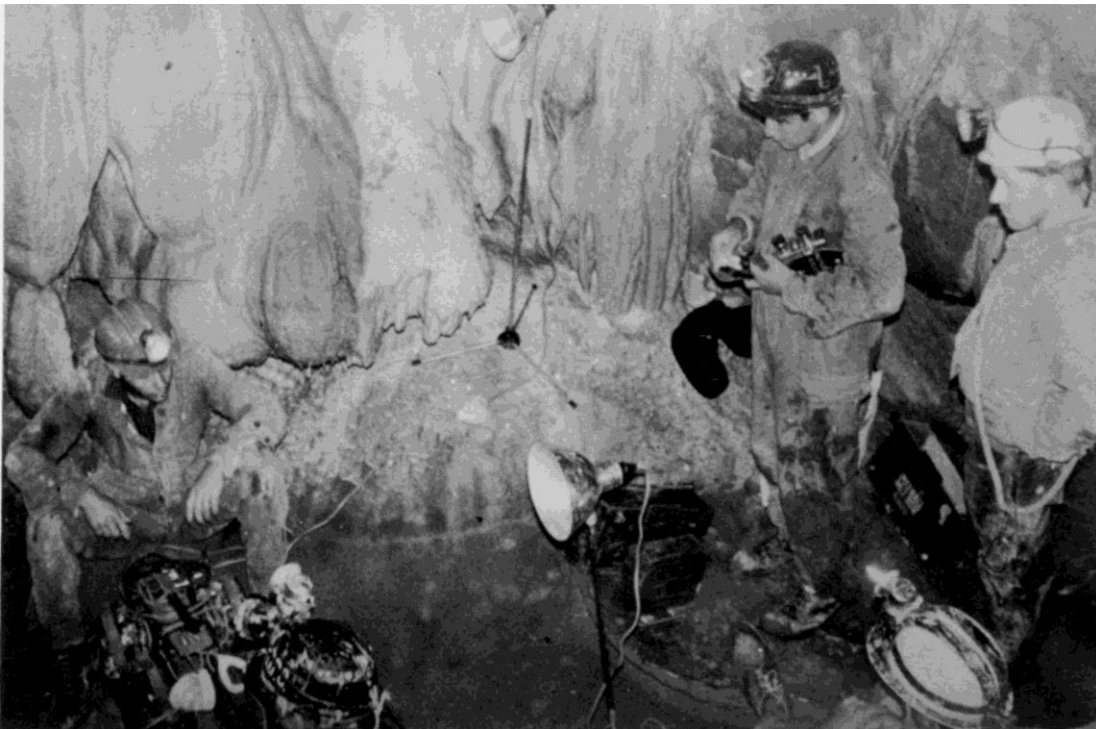
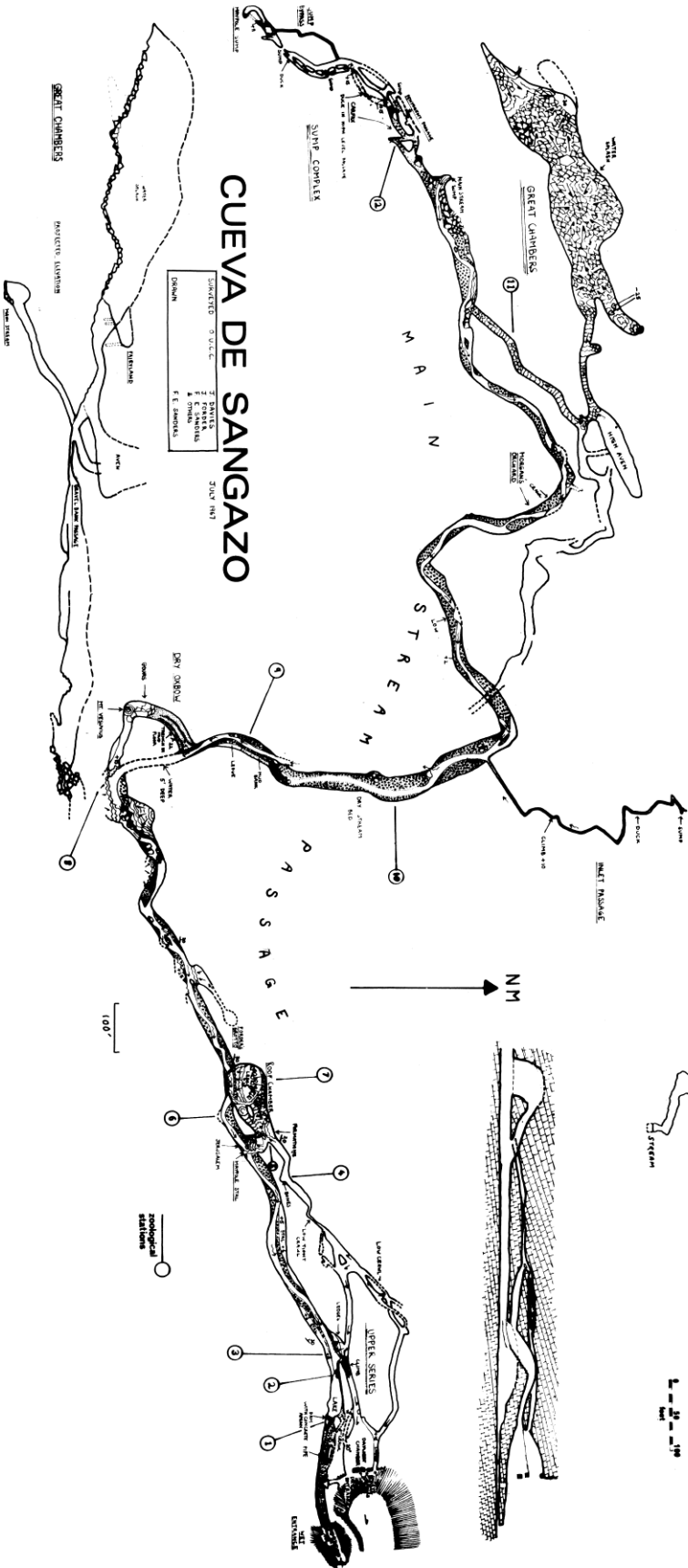


Fig. 2 Filming in the Cueva de Sangazo



DRAWN BY:
 1. J. DAVIS
 2. E. SANDERS
 3. E. SANDERS
 4. E. SANDERS

