

E. K. TRATMAN'S UNDERGROUND CINÉ FILMS 1933-1937

by

C. J. HOWES

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ABSTRACT

Surviving examples of early underground ciné films are rare, some of the best being those produced in Mendip caves by E. K. Tratman between 1933 and 1937. The earliest of these was intended as an experiment to determine the difficulties involved in filming underground, and was made in Goatchurch Cavern, Read's Cavern, and other caves. This led to a more ambitious project, filming the descent of Lamb Leer in 1937. This paper places Tratman's films in the context of caving films produced elsewhere, and details their production.

INTRODUCTION

Several attempts were made to produce ciné films underground between 1894 (when the technique was first used in Britain), and World War II. Many of these were by professional film companies, such as those based in Hollywood, or for newsreels. A few were by amateur photographers who tried to record realistic caving conditions, rather than 'show cave' situations. The results are not well known, and many have been destroyed or lost. Perhaps the best surviving examples of pre-war cave ciné film are those made by Edgar Kingsley Tratman between 1933 and 1937.

The earliest cave scene depicted on ciné film is of a sea cave entrance on the coast of Galicia in Spain. *A Sea Cave Near Lisbon* was made by Harry Short, and was first shown to cinema audiences in October 1896 (Anon, 1896). Between 1919 and 1925 Congo Caves in South Africa were the subject of several attempts at filming underground, the main difficulty being the production of suitable lighting (Craven, 1985).

Between 1925 and 1927 an American, Russell Trall Neville, made a film titled *In The Cellars Of The World*. This was the first serious attempt to depict undeveloped caves, as well as tourist sites, on ciné film. The production of these films, and others made elsewhere before the Second World War, are discussed in detail by Howes (1989).

TRATMAN'S CAMERAS AND FILM

By the 1930s ciné cameras were cheaper and more readily available, encouraging more amateurs to take up this form of photography as a hobby. One such person was E. K. Tratman, who was in Singapore from 1929 (Savage, 1979) and was therefore only able to follow his cave and photographic interests during visits to Britain. One such occasion was in the summer of 1933 (Hewer, 1935), when he decided to attempt some underground filming, as an experiment to see if it could be accomplished with the limited resources at his disposal.

Tratman owned two cameras, a Ciné-Kodak and an Agfa Movex, both of which were pressed into use. Of the two the Ciné-Kodak proved the best, as the Agfa

... had the bad, incurable habit of "loosing its loop" thus causing the film to be moving when the shutter was open. Its f1.3 lens was also found to be not nearly as good as the Kodak f1.5 (Tratman, 1974).

Despite the various apertures Tratman ascribed to his cameras in his later papers, the actual values on the Agfa and Kodak models were f1.5 and f1.9 respectively (Anon, 1932; Schmidt, 1988). During the experiments the fault with the Agfa camera caused the loss of several hundred feet of film. The film used throughout was 16 mm black and white Kodak Superpan. This was a reversal film, being processed to give a positive image rather than a negative which required printing.

LIGHTING

Lighting presented greater problems. Magnesium flares (as used by Neville and others) produced voluminous clouds of smoke and fumes, which prevented further filming for several hours. Magnesium was also costly. Tratman's solution was to acquire five paraffin-vapour flood lamps (FIG. 1) made by the Tilley Lamp Company (Tratman, 1935). Four of these were of nominal 1000 candle power each, with the fifth being smaller, producing only 300 candle power (candle power = candela $\pm 2\%$). Tratman later stated (1966, 1969) that he was only using two of the larger and the one smaller lamp for the earlier films, supplementing these later with a further single burner lamp and a huge triple burner 'searchlight' that was named 'Big Bertha'. This lamp, in particular, proved the lighting mainstay for Tratman's later photography.



FIG. 1—B. A. CROOK BRINGING ONE OF THE LAMPS OUT OF THE ENTRANCE OF LAMB LEER IN THE 1937 FILM

The extra lamps were necessary to provide enough light for filming in the cave environment, which caused continuous underexposure. Exposure of ciné film depends upon its speed of travel as well as the aperture used. Twenty-four frames of 16 mm ciné film are used every second, the film moving in jerks to allow each piece of film to be stationary during exposure. This speed results in an exposure of about 1/64 sec., too short for the light produced by the Tilley lamps.

To avoid the problem, Tratman filmed at half speed—12 frames per second. This exposed each frame for 1/32 sec., sufficiently long to allow the Tilley lamps to illuminate the film correctly. Even so, lamps had to be kept to within ten to twenty feet of the subject to avoid underexposure, so most shots show cavers in close-up, or at most walking close to the camera. Half-speed filming produced the effect, upon projection, of people apparently moving at double speed. This was corrected by everyone walking at half speed while being filmed.

THE 1933 FILMS

Little was known about underground filming at that time. Tratman only knew of some short lengths shot for commercial reasons in easily accessible show caves, such as those at Cheddar (Tratman, 1935)). There is no indication that he had heard of the work of Neville or of any other film made elsewhere, and he relied upon his own knowledge of photography and caves.

Tratman (1935) chose Goatchurch Cavern as a readily available location, and the majority of his 1933 film (FIG. 2) was shot there with additional footage in Read's Cavern and shorter lengths in Aveline's Hole, 'The Gulf' at Sandford Hill, and Swildon's Hole. A letter from Tratman to T. R. Shaw in 1968 suggests that the final film was intended to 'represent a trip down and back through Goatchurch', despite the presence of footage shot elsewhere, and the possibility that some of the film may have been made as late as 1934.

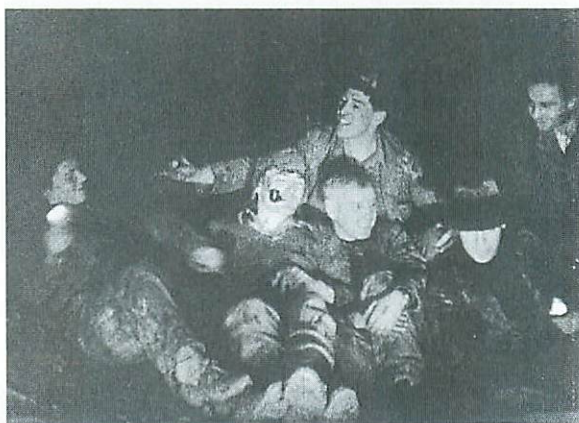


FIG. 2—A STILL, PROBABLY IN GOATCHURCH, FROM THE 1933 EXPERIMENTAL FILM. FRANCIS GODDARD IS CENTRE TOP, JOHN BELL SEATED WITH PIPE

A total of 800 feet of film was taken, it being Tratman's intention to add to this from time to time. This length included some sequences of film taken in the U.B.S.S. Hut, of the old 'bath', and of the 'wim-wam' used for cooking (see Shaw, 1969). The Hut interior scenes are presumably also shot at half speed. If this is not the reason, there are certainly several people who eat very quickly.

One view of a group outside Goatchurch indicates that at least nine cavers were involved in the film, but it is likely that other individuals would have helped at some time during the operation. None of the 1933 film was scripted, or titled in the edited version. It was never publicly exhibited and was only shown to members of the Society (Tratman, 1974).

THE 1937 LAMB LEER FILM

In 1937 Tratman was again on leave from Singapore, and the decision was made to follow up his earlier experiments with a film of the descent of Lamb Leer. This utilized the extra lamps purchased about 1934, but still depended on filming at half speed with cavers moving at half speed, resulting in one hapless caver apparently falling at double speed in the final film.

The technical difficulties had largely been solved in the production of Tratman's earlier film. The major problem now was to find a team of helpers to appear as 'actors'. Since a large number of cavers were needed, Wessex Cave Club members were added to those of U.B.S.S. A few people appear throughout the film, but many appear only briefly. About twenty visits took place (Tratman, 1966), some of them made to find usable locations. Film was taken every weekend for two months (Anon. 1938a). The finished film is credited as a joint Wessex and U.B.S.S. production, with Tratman as director.



FIG. 3—CARRYING EQUIPMENT FROM THE U.B.S.S. HUT. THIS STILL IS TAKEN FROM KODACHROME FILM AT THE START OF THE 1937 FILM. NEITHER PERSON HAS BEEN IDENTIFIED



FIG. 4—J. F. BLENKINSOP IN THE 1937 LAMB LEER FILM

The beginning and end of the film were taken on the surface (Fig. 3) using Kodachrome colour film, the earliest known examples of colour ciné film used in a caving context. Kodachrome had been introduced in 1935, and was the first colour ciné film in general use. The total length of film shot was about 5,000 feet (Tratman, 1966; 1969), of which about 2,300 feet was correctly exposed (Tratman, 1974) and 500 feet was used in the edited version (Tratman, 1969).

IDENTIFICATION OF CAVERS INVOLVED

Extensive enquiries have been made to identify people in the film. Tratman himself appeared on occasion when another caver took over his normal role as photographer. Others (Figs. 4 and 5) included S. B. Adams, N. V. Baldwin, J. Bell, J. F. Blenkinsop, B. A. Crook, J. Field, F. W. Frost, F. J. Goddard, Molly Hall, and Curwen Rees.

Two girls appear in the underground portion of the film. One is Molly Hall, but the other has eluded identification (Fig. 5). In surface shots Bruce and Jo Perry can be identified, but it appears they did not venture underground. In addition, tentative identifications of E. W. Sharpe, and G. A. Walton have been suggested but not confirmed.



FIG. 5—LAMB LEER 1937. JOHN BELL (TOP), FRANCIS GODDARD, AND (LEFT) AN UNIDENTIFIED FEMALE CAVER

THE AERIAL CABLEWAY

Baldwin and Sharpe were also involved with the production of the aerial cableway across the main chamber, together with J. W. Duck and other Wessex members (Baldwin, 1938). The cableway itself used the old windlass platform as a base, a wooden sugar crate suspended on a cable being winched across the drop. The project was intended to permit visitors to the 1937 British Speleological Association (B.S.A.) Conference in Bristol to gain easier access to the passages beyond the main chamber (Duck, 1938). Certainly, the completed aerial cableway (constructed between May 17th and July 19th, 1937) features heavily in Tratman's film.

Baldwin's account uses several of Tratman's pictures, which appear similar to shots in the ciné film. These could have been taken during visits made to plan locations (Tratman, 1969).

The cave was partly illuminated by the paraffin lamps, under the control of Bertie Crook (Duck, 1938), for the B.S.A. visit. These were often left in the cave between visits, it only being necessary to bring in new mantles. Once the filming was finished the lamps were removed, but they were still in use on Mendip in the 1950s, to illuminate the Gorge in G. B. Cave.

PUBLIC SCREENINGS OF THE FILM

It was planned to show the finished film at the 1937 B.S.A. Conference in Bristol, as the programme of events records:

Cinema films taken in Lamb Leer Cavern by the Wessex Cave Club will be exhibited in the Bristol News Theatre, Peter Street, from Thursday to Saturday, July 22-24 and from Monday to Wednesday July 26 to 28th. (Anon, 1937a)

A similar entry was published in both the Wessex Cave Club Circular (Anon, 1937b) and the Bristol Evening Post (Anon, 1937c). The latter also reported that

What is described as the first professional attempt to film a descent in a natural cave will be made near Bristol shortly.

Capt. Riego, manager of the News Theatre, Bristol, has arranged for a camera unit to come down for Jacey Cinemas Ltd . . . The film will be taken in Lamb Leer . . .

Although the report would seem to indicate further underground filming was planned by the professional company, it is more likely that it was intended to film some aspect of the B.S.A. Conference to place Tratman's production in context. However, his film was not finished in time, and no later mention of it or the presence of Jacey's camera unit is made in reports of films shown at the theatre. Since the ropeway was not completed until just before the conference, much of the filming would have had to be done afterwards, although since the paraffin lamps were in place for the Conference it is likely that some filming had already taken place by then.

Editing and titling was undertaken by S. B. Adams and others after Tratman had returned to Malaya, and Duck produced the surveys. Indeed, Tratman did not see the result until after the war (Tratman, 1969) since he was interned as a prisoner of the Japanese when Singapore fell.

The title of the film was given as *Lamb Leer Cavern, Mendip Hills*. The film, about eleven minutes long, was silent, and no sound track was ever added. The first public showing was at the 1938 BSA Conference at Giggleswick, where it was well received (Anon. 1938a, b; Blenkinsop, 1938; Pearce, 1944).

THE FILMS TODAY

The Society has seven reels of film. These consist of two reels of some of the 'out takes' from the Lamb Leer film, one of hut scenes at Burrington taken in 1933 (about fifty foot), one reel of the 1933 experimental films at Goatchurch and Read's Cavern (about 275 foot), and three copies of the 1937 finished film of Lamb Leer. These three are consistent with a note made by Tratman in 1974 when he stated that the U.B.S.S. and himself had copies, with a further reprint in existence. In addition, Wells Museum has three short lengths of poor quality 'out takes'.

The overall condition of the films is still reasonable considering the varied conditions of storage they have sustained. The colour film at the start and end of the 1937 footage has faded badly and now appears a warm sepia colour. This is consistent with dye fading due to storage at high temperatures, humid conditions, or alongside chemical fumes such as coal gas or industrial chemicals. The films were transferred to VHS video in July 1984.

CONCLUSION

The Tratman films form the earliest ciné record of caves under caving conditions to have been made in Great Britain. They show the techniques used by Mendip cavers in the 1930s and, apart from their entertainment value, form a unique historical document.

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CHRIS HOWES, 51 Timbers Square, Roath, Cardiff CF2 3SH, U.K.