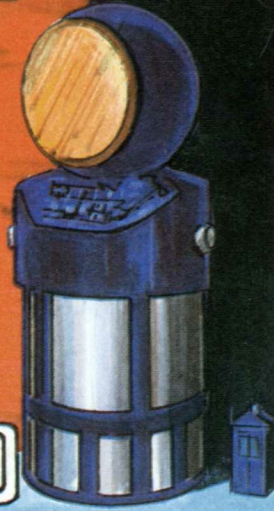


CARNIVAL OF MONSTERS

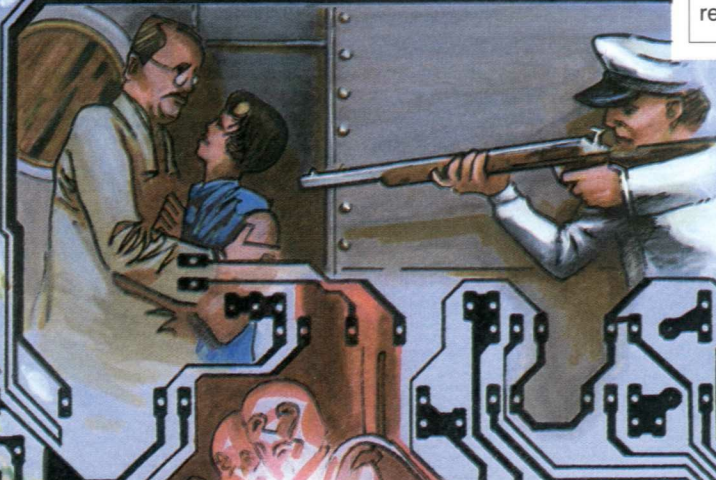


DOCTOR WHO



AN ADVENTURE IN SPACE & TIME

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code:PPP~ Robert Holmes



On the planet Inter Minor, two Lermans named Vorg and Shirna make an undignified arrival in the cargo bay of a space port. Vorg explains to disapproving officials, Kalik and Drum, that he and his assistant are travelling entertainers who have with them a Miniscope - a miniature 'zoo' containing life forms from all over the galaxy.

The Doctor plans to take Jo to the planet Metabelis Three, but instead the TARDIS lands in the hold of a passenger ship on the Indian Ocean in the year 1926. However, the Doctor's suspicions that this is not really Earth at all are confirmed when a plesiosaurus rises from the water to menace the ship. The travellers try to bluff their way back to the TARDIS but the First Mate, Andrews, believes they are stowaways and escorts them to be locked up in a cabin. The Doctor spies a strange metal plate in the floor and is intrigued to discover that none of the crew can see it. He tells Jo the plate is not of Earth origin and, according to legend, the ship they are on - the SS Bernice - mysteriously vanished during its voyage.

Using Jo's skeleton keys to escape from the cabin, the travellers make their way back towards the TARDIS. As they move through the ship, they are amazed to find the crew going through exactly the same motions as before. The Doctor realises that the ship and its occupants are all part of a collection - a peepshow. While the crew is distracted by the dinosaur once more, the Doctor and Jo steal back into the ship's hold. To their astonishment, a giant hand reaches into the hold and takes the TARDIS!

Vorg removes the TARDIS from the hold and sets it down inside a different section of his Miniscope. Pletrac, a leading official, arrives and refuses Vorg a visa to entertain. Vorg, however, produces a document which seems to give him permission, and Pletrac leaves again to verify it. Kalik is curious about the life forms within the scope so Vorg displays images of Tellurians, an Ogron and a ferocious dragon-like creature called a Drashig on the screen. The showman explains that he can also control his 'specimens', making them aggressive. He twists a dial.

Inside the scope, Andrews immediately picks a fight with the Doctor. The Time Lord knocks his assailant down and he and Jo make a run for it. They are caught as they reach the strange metal plate, where Andrews raises a gun to shoot them. At this moment, however, Vorg turns the dial back to normal and Andrews instantly forgets that the Doctor is even there. The travellers then use the sonic screwdriver to open the metal plate. Behind it they find an opening leading to the inner workings of the Miniscope.

Pletrac returns, stating that Vorg's document is a fake. When he learns there are living creatures inside the scope he orders that it be destroyed. An Eradicator weapon is trained on the machine but proves ineffectual, although the circuits and life forms within are shaken up. Drum finds the TARDIS and removes it from the scope, where it grows to normal size. Checking the circuits, Vorg discovers that the Doctor and Jo have strayed into the Drashig enclosure. He watches as a Drashig bursts from the swamp to menace the travellers. Fortunately, the creature's sight is poor and it passes them by. However, when more of the monsters appear, Vorg has no choice but to put his hand in and allow the pair to escape.

The Doctor and Jo make their way back to the SS Bernice, but they are pursued by the Drashigs. The ship's crew try to hold the monsters off with rifle fire.

Shirna tells Kalik that the Drashigs have got out of their circuit and could break out of the scope altogether. Kalik sees the chaos that would result as a chance for him to overthrow his brother, President Zarb, and he sabotages the Eradicator. The Doctor, meanwhile, has found a way out of the scope. He collapses on the ground where, before the eyes of Pletrac and the others, he grows to full size. Recovering, he states that he must get Jo out of the machine before it breaks down completely.

The outer casing of the Miniscope is beginning to buckle and Vorg and Shirna realise that the Drashigs may soon break out. Linking the scope to the TARDIS, the Doctor rigs up a device which will return the specimens to their rightful times and places. He then uses this link to get himself back inside the machine, where he finds Jo. However, the life support systems are beginning to fail. The passengers and crew of the SS Bernice collapse, while inside the scope's workings the two time travellers also fall to the floor.

Before Vorg can operate the Doctor's device, a Drashig breaks out of the scope. It grows to full size and kills Kalik. Reacting quickly, Vorg repairs the Eradicator and uses it to destroy the Drashig and the others that follow. He then operates the Doctor's link-up and the scope's occupants are all returned from whence they came.

The Doctor and Jo appear beside the TARDIS. While Vorg starts to 'entertain' Pletrac, the two travellers leave in the TARDIS, watched by an astounded Shirna.

DW (On 1) - 13 -

CJMS: 2B, 1B

74. 2B IS PLETRAC /BOOM B1/
- 11. EXT. CITY. D.Y.
Pull back with him to deep 3-s
(PLETRAC - GREY IS THE OTHERS BUT BARELY AUTHORITY - HIS LIVED)

PLETRAC: Another functionary has dared to ascend to the High Level.

75. 1B 2-s KALIK/ORUM /KALIK: One witnessed the event.
ORUM: One cannot understand why they do it.

76. 2B CMS PLETRAC /KALIK: But then one is not a functionary./

PLETRAC: It's a growing problem. Is members of the official caste we must all share President Zarb's concern.

77. 1B MCU ORUM /ORUM: They've no sense of responsibility. Give them a hygiene chamber and they store fossil fuel in it./

78. 2B MCU /Push in to MCU
PLETRAC: Minor behavioural patterns can be changed through education. But this epidemic of anarchy & insurrection in the president's view, is due to our functional caste feeling a certain lack of variety in life.

79. 1B MCU KALIK /KALIK: They are well fed, and well cared for ...

(2 next) - 13 -

DW (On 1) - 14 -

80. 2B MCU A/B /PLETRAC: Perhaps they have other needs. Zarb has decided to foster interstellar trade and cultural exchanges in order to broaden the outlook of our people./

81. 1B MCU KALIK /KALIK: What do we want with these aliens and their mongrel culture?/

82. 2B CMS PLETRAC /Crab L with him to show VORG & SHIRNA deep bgd.
(HE INDICATES THE LURMANS)
PLETRAC: Where are the Lurmans?
ORUM: Yes. One ordered them to wait there.
(PLETRAC STARES WITH SOME CURIOSITY)

83. 2B MCU PLETRAC /PLETRAC: Ah ... interesting. We must collect their data-strips.
Orum?

84. 1B 2-s ORUM/KALIK /Pen ORUM R to 2-s ORUM/PLETRAC
ORUM: You mean you want one to ... physical contact?
PLETRAC: There's no danger.

85. 2B 2-s ORUM/KALIK /KALIK: You're chairman of this tribunal. One suggests you approach them./

86. 1B MCU PLETRAC /PLETRAC: One has no fears. Your Lurman is a simple fellow. Good-natured and trusting, he responds well to firm leadership and is capable of great loyalty./

87. 2B 3-s ORUM/KALIK/PLETRAC /KALIK: Perhaps we should import them to replace the functionaries./

(2 next) - 14 -

(On 3) - 15 -

(PLETRAC ADJUSTS HIS TUNIC)

PLETRAC out R. PLETRAC: Very well. One will now collect their data strips.

88. 2B MS Door /PLETRAC in L (OUT M.M.Y.)

89. 1B (On turn) 2-s ORUM/KALIK /VORG IS STILL WORKING ON THE STROBE.

90. 2B A/B /SHIRNA SEES PLETRAC APPROACHING)

P A U S E (I push in)

91. 2B MS Door /PLETRAC in SHIRNA: VORG ...

92. 1B (pushed in) Loose 2-s SHIRNA/VORG (VORG LOOKS UP.)

93. 2B CMS PLETRAC /PLETRAC HAS STOPPED SOME DISTANCE OFF. HE LISTS HIS HAND)

94. 1B A/B /PLETRAC: We friends./

95. 2B MCU PLETRAC /VORG: (DOES) Your worship./

96. 1B 2-s SHIRNA/VORG /PLETRAC: You give magic talk-boxes along-with me. You very good fellow.
SHIRNA: Magic talk-boxes! Is he petty?
VORG: I think he requires our data-strips. Do you know where they are, my dear?

97. 4B MS SHIRNA/VORG /Pen SHIRNA to PLETRAC (SHIRNA DIGS INTO HER SLEEVE AND PRODUCES TWO SMALL PLASTIC DISCS)

98. 2B CMS PLETRAC /SHIRNA: All right. I shan't bite./

(1 next) - 15 -

(On 5) - 16 -

(PLETRAC TAKES THE DISCS CAUTIOUSLY. HE BOWS S.L.M.Y.)

99. 1B MCU SHIRNA /PLETRAC: You stay. We talk-up by and by.
SHIRNA: We're not savages, you know! We have performed before their crowned heads of the galaxy.

100. 2B A/B /SHE IS TALKING TO HERSELF.
PLETRAC HAS HURRIEDLY REJOINED HIS COMPANIONS)

101. 2B CMS VORG /VORG: Perhaps that was his servant language. They're could be still feudal here on Inter Minor.

102. 4B 2-s SHIRNA/VORG /SHIRNA: You don't seem to know much about them.
VORG: Nobody does. This is the planet of mystery, Shirna. Inter Minor cut itself off from the rest of the stellar system thousands of years ago.

103. 2B MCU VORG /SHIRNA: Why?
VORG: It was during the time of the great space plague. Only a few score of Minorians survived. Since then they have shunned all outside contacts.

104. 4B 2-s A/B /SHIRNA: So that's why you are so anxious to come here? (TOUCHING THE STROBE) None of them will have seen anything like this!

105. 1B CMS VORG

(5 next) - 16 -



STORY REVIEW

Tim Robins

'Carnival of Monsters' continues the unwitting debunking of television naturalism begun in 'The Three Doctors' (Serial "RRR"). It is, in fact, a witty examination of television itself - that Twentieth Century peepshow.

Robert Holmes has cleverly constructed a story within a story: the first is set inside the Miniscope - a miniaturised menagerie of alien life forms - while the other takes place on the planet Inter Minor, to which the Miniscope is brought by Vorg and Shirna, two members of Equity Galactic.

Inter Minor is a feudal, caste-based society where we meet pompous, procrastinating members of the 'official species' and impoverished, proletarian functionaries ripe for revolution. Here there is no chance of upward social mobility, a point neatly illustrated by a visual pun: as the story opens, a functionary is shot down from a city parapet for daring to ascend to a higher level.

But Holmes was no great admirer of what he described as the 'Star Trek' moralising of the Pertwee stories, so 'Carnival of Monsters' is unlikely to be successfully read as a political attack on British imperialism or a manifesto for the animal liberation front - despite the Doctor's and Jo's frequent pronouncements on zoos, small boys with rock pools and the immorality of keeping pets.

In Malcolm Hulke's book 'Writing for Television in the Seventies', Holmes stated that he saw his work on 'Doctor Who' as an opportunity to indulge in fantasy. 'Carnival of Monsters' is often plodding and over-talkative but it is also shot through with the same sense of playfulness that pervaded 'The Three Doctors'. Holmes provides something for everyone: monsters for the kids, witty banter for the adults, Barry Letts' and Terrance Dicks' tuppenny-worth of anti-imperialism, and a chance to indulge his own interests in the theatre and all things Victoriana. Holmes juggles these elements like...well, like three magnum pods and a yarrow seed.

If 'Pantomime' provides a key to understanding the riotous melodrama of 'The Three Doctors' then 'Television' fulfills a similar function for 'Carnival of Monsters'. The Miniscope is the story's allegorical TV set. The "good, old-fashioned live entertainment" Vorg speaks of is not the theatre but the early years of television when all programmes, including drama, were coming to you live - a time looked back on with considerable nostalgia by those within the profession who were not quite old enough to remember it.

The Miniscope is transmitter and receiver in one. Its 'glo-sphere' receives live electronic transmissions from the miniaturised environment inside. It is the proverbial 'window on the world'. Like a TV set it occasionally breaks down and the screen fills with static. "Who," Vorg wonders, "is going to pay good credits to see a blob in a snow-storm?"

And on television tonight, Circuit 3 is showing one of those classic serials so beloved of the BBC. It's 1926 and we're on the SS Berrice, a slow boat to Bombay. Don't worry if you miss this episode; like all BBC period dramas it is bound to be repeated - again and again.

On Inter Minor, the official species - represented by Pletrac, Kalik and Grum - wonder what to make of this radical new form of entertainment. Their superior, the mighty Zarb, apparently sees its potential as an opiate of the masses, while Grum feels it will incite rebellion. In this way the debates surrounding the political ramifications of television are neatly summarised.

Vorg, naturally, has a few words of his own on the subject: "Our purpose is to amuse, simply to amuse; nothing serious, nothing political". Does Vorg, a traditional showman - part shaman, part charlatan - speak for Robert Holmes himself; and is the message aimed at the moralising production team? Holmes is clearly having fun, but at whose expense? When last seen he was being thoroughly chastised for perpetrating that unspeakable act of television violence called 'Terror of the Autons' (Serial "EEE"). Vorg (or Holmes) has a few words for those guardians of children's viewing habits: the Drashigs, those most evil, most vicious and undoubtedly most frightening of creatures are, he tells us, "great favourites with the children".

Vorg's "little carnivores" are spirited representations of all the monsters that have gnashed, snapped and torn at each other - and at the Doctor and his friends - throughout the ten years of 'Doctor Who'. We hardly need cameo appearances by Ogrons and Cybermen to remind us that the series is itself a 'carnival of monsters'. Holmes gets



PRODUCTION OFFICE

Jeremy Bentham



At a time when the vast majority of 'Doctor Who' stories were based on ideas conceived by the Producer and Script Editor, 'Carnival of Monsters' emerged as something of an oddity, being almost totally the creation of Robert Holmes.

Terrance Dicks made no secret of his admiration for Holmes' work and was always keen to approach him at the inception of a season in the hope that he would be free to tackle a story. Ordinarily the initial 'phone call would involve Dicks suggesting a few story concepts to Holmes to see which he liked, but on this occasion the roles reversed as Holmes took the initiative and asked his prospective Script Editor if he could do a story set in the 1920s.

Since acquiring a taste, many years earlier, for novels such as 'Three Men in a Boat', 'England, Their England' and the many whimsical works of P.G. Wodehouse, Holmes had developed a fascination with the English privileged classes, whom he once described as a "vague and effete species...who nevertheless introduced a certain style and grace into their surroundings wherever they went". Holmes also shared with Terrance Dicks an absolute loathing of bureaucratic officialdom, or "those who would make the world as dull and as grey as their own petty, small-minded existences". It was an irresistible temptation to combine these two pet subjects in one story and, as far as Dicks was concerned, it was an offer too good to turn down.

Efficient as ever, Holmes turned in on time a virtually flawless set of scripts, bearing the working title of 'Peepshow'. Barry Letts and Terrance Dicks loved it. Holmes had neatly encapsulated the associated traits of no less than three English societies: the colonial generation; carnival folk; and the bureaucratic Civil Service.

As 'Peepshow' was planned as the first story of the season, Letts again exercised that clause in his contract which allowed him to direct as well as to produce 'Doctor Who' serials. One of his early priorities was casting, and in this respect he was lucky enough to be able to engage almost all of the people he wanted. These included Tenniel Evans, the versatile, Welsh-born character actor on whose advice Jon Pertwee had first approached the 'Doctor Who' production office, in 1969, with the notion of assuming the title role. Evans and Pertwee still worked together on the BBC Radio series 'The Navy Lark', so it was fairly easy for Pertwee to 'repay the favour' by inviting Evans to take up a role in 'Doctor Who'.

For the part of First Officer John Andrews, Barry Letts went back to a young actor he had auditioned and almost cast in the regular role of Mike Yates two years earlier, Ian Marter. At the time of casting for 'Terror of the Autons' (Serial "EEE"), Letts had felt that Marter was

just that bit more suited to a naval cap than to an army beret, so he was happy to give him the opportunity now to gain his 'sea legs' in 'Peepshow'.

For the roles of Vorg and Shirna, Letts signed up two genuine Cockney artistes, Leslie Dwyer and Cheryl Hall, while in the case of his principal villain, the inscrutable Kalik, he had no hesitation in offering the part to one of his favourite 'rep company' members, Michael Wisher.

From an economic point of view, 'Peepshow' was unusual in that it came in well under-budget. Knowing that he would be facing some very heavy costs later in the year, Barry Letts asked his principal designers to pull every trick in their books to bring in an expensive-looking show without spending an excessive amount of money. The ploy worked. Sets were kept to the bare minimum and, where possible, used dressings and props left over from other programmes. Even with the largest of the sets, the inside of the Miniscope (which was called 'the Strobe' in Robert Holmes' original scripts), Designer Roger Liminton made good use of hanging foreground miniatures to increase its apparent dimensions.

As this was to be the first story of the season, the Doctor was provided with a new gadget, a string file. This handy little device was the thickness of a piece of string and hence could be easily concealed about his person, for ready use on occasions when the Sonic Screwdriver was of no help. The Sonic Screwdriver itself also underwent a modest upgrade at this time, courtesy of John Horton. This was partly because the prop used the year before had gone missing and partly because BBC Enterprises had intimated a wish for it to have more 'play appeal' to encourage prospective clients in the toy manufacturing field.

This story marked the last on-screen credit for Special Radiophonic Sound designer Brian Hodgson, who left the BBC at the end of 1972 to devote himself full-time to his own sound studio company, 'Electrophon'. Thereafter the responsibility for creating all of 'Doctor Who's many weird and wonderful background and foreground sound effects would fall to the shoulders of fellow Radiophonic Workshop veteran, Dick Mills.

The finished episodes of 'Peepshow', renamed 'Carnival of Monsters' shortly before recording began, carried the new 'Doctor Who' theme music (see 'The Three Doctors' (Serial "RRR")). However, the old theme was re-dubbed onto the opening and closing titles during the lengthy editing sessions which subsequently took place. The need for these sessions arose when it transpired that all of the episodes over-ran greatly in their original form and Barry Letts decided that the only way to overcome this problem was to reshape the story. In the original version, the Inter Minorans and the Lermans do not even communicate on anything other than a pidgin English basis until episode two. The re-edit meant that certain priceless gems of Robert Holmes' dialogue were lost, including a highly amusing "You give us magic talk-boxes" sequence as Pletrac attempts to borrow the identity cards carried by Vorg and Shirna. Ironically, however, a copy of the original episode two - complete with new theme music - did find its way out to ABC TV in Australia, where it has since been transmitted on many occasions. While this episode does duplicate certain scenes included in the re-edited version of episode one, it also features a number which are missing altogether from the 'official' master tapes of the story. In this respect it is a more faithful rendition of Holmes' original narrative, even if it does run to nearly thirty-five minutes in length.

When it was decided that 'The Three Doctors' would be a more suitable story to open the season with (see page "65-07"), 'Carnival of Monsters' was relegated to second place in the running order.



THE DRASHIGS

Jeremy Bentham



For 'Carnival of Monsters' to succeed as a convincing serial, one key element that had to be right was the realisation of the Drashigs.

Only once before in 'Doctor Who' had a serious attempt been made to construct a monster that was "as big as an elephant - bigger...", and that was the Tyrannosaurus Rex for 'Doctor Who and the Silurians' (Serial "BBB"). In that instance the Visual Effects Designer had opted to build a full body suit, worn by an actor with the considerable weight of the dinosaur head being supported by a wire hung from the ceiling. The finished rig was cumbersome, unwieldy and, as Barry Letts learned with hindsight, totally unnecessary given the facility of CSO. As was pointed out to Letts, the team could just as easily have animated a model of the dinosaur and placed it in the correct perspective during recording.

When he came to direct 'Carnival of Monsters', Letts remembered these lessons and suggested the use of models to Effects Designer John Horton, whose responsibility it was to create the Drashigs. Horton agreed and estimated that with the money he was being offered he could afford to make three of the creatures; two fairly static models for group shots and one fully-articulated rod puppet for the scenes which involved 'acting on cue'.

The under-body of the principal Drashig was a wire frame housing a series of jointed rods and pistons. Working behind and below the two-and-a-half foot long monster, the puppeteer, by contracting and releasing the rods, could make it stretch and concertina its body to suggest locomotion, swivel its neck from side to side (the neck rods were linked by a set of Universal joints) and open and close its mouth.

The head of each Drashig housed a genuine animal skull, in this case that of a fox, thus making construction of the mouth and jaws a lot easier than building everything from scratch. The outer 'skin' of each beast was lightweight latex rubber, cast from a mould of the Drashig

sculpture made by Horton during the design phase of the operation. This 'skin' was carefully applied over the puppet frames with strips of foam rubber packed in between the layers to flesh out the bodies.

Finally the creatures were painted and stained a tan brown colour and, before each filming session, coated with a lubricating oil to make them glisten under the powerful studio lights.

Outgoing Special Sounds composer Brian Hodgson created the eerie Drashig screams by carefully modulating and mixing the cries of various wild birds; slowing the sounds down, adding echo and overlaying one on top of the other until he achieved an impressive shriek which both he and Barry Letts were happy with.

The majority of scenes involving the Drashigs were shot on film at the Visual Effects Department. Usually the camera was overcranked to make the creatures' movements appear smoother and more ponderous when played back at normal speed.

A range of miniature sets had to be built for the Drashigs too, especially for those scenes which called for the creatures to burst through ship bulkheads or panels within the Miniscope. To lend a sense of scale to these sequences, each model bulkhead was carefully moulded in thin plaster so that it would fragment easily and convincingly when the Drashig burst through. And to guard against takes going wrong, each bulkhead and each shot had to be duplicated several times over so that the best could be used in the final edit.

The few Drashig scenes not done on film were those which involved both the puppets and live action together in the same shot, for example when one of the creatures appears in the hold of the SS Bernice. Here, the main puppet had to be brought into the recording studio and shot against a yellow CSO screen.

The most complex shot of all was that of Major Daly, one of the passengers on the ship, machine-gunning a Drashig as it emerges through a deck hatch. Through a complex arrangement of mixed feed CSO and Inlay masking, a caption slide of the ship's main deck was combined with model action shots of the Drashig puppet and location-filmed footage of the Major.

Not all of the footage that was shot made it to the final edit of the story, however. One of the lost scenes was of a Drashig attacking the Doctor while he is sliding down a rope to the base of the Miniscope in episode three. The creature bites through the rope, causing the Doctor to fall (a shot pre-filmed using a stunt double for Jon Pertwee), which explains why he is groggy and promptly collapses as he staggers from the scope.

The Drashigs were unusual 'Doctor Who' monsters in many respects - after all, alien races encountered by the Doctor and his friends generally tended to be highly intelligent beings rather than ferocious carnivores - and although some shots and sequences were more successful than others, they proved to be a worthwhile new addition to the series' canon of other-worldly life-forms.



LEFT: This effects shot of a Drashig clearly shows the fox skull around which the head was constructed.



"Stale overlit shells in a great circle" is how the BBC Television Centre's studios were once described by writer and director David Hare. "Film is free" he observed in 1982, declaring video to be "the hopeless hybrid between theatre and film".

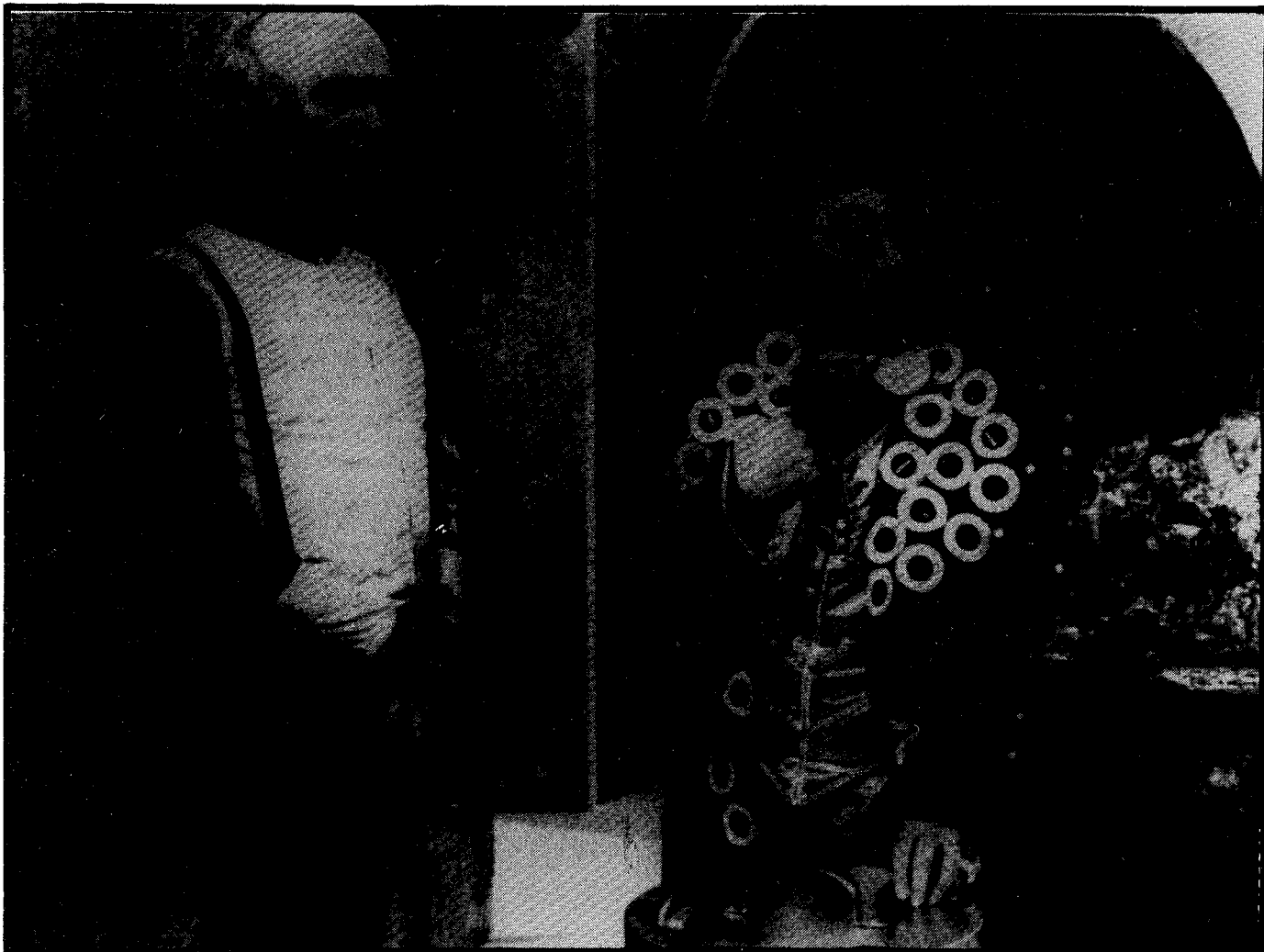
'Doctor Who' has from the beginning been made in electronic television studios, which is the traditional production method for BBC drama programmes. The 'ground rules' for drama production - as for all other types of television production - were established at the Alexandra Palace studios in the 1930s. Subsequent moves to the Lime Grove and Riverside studios, and then to the Television Centre at White City in the 1960s, improved the facilities available but had little bearing on the way in which programmes were actually made.

The advantages of studio production are bound up in the cost-effectiveness of heavy investment in permanent resources. Large multi-camera studios are worked for six and a half days a week, with half a day for maintenance. In 1972, when 'Carnival of Monsters' was made, it was possible to produce thirty minutes of programme per day, the same as had been achieved in the early black-and-white

years of television. This is more than twice the amount of film produced on an average day's film shoot.

However, location recording for drama was required fairly early on in television's history, led particularly by children's drama productions. As Shaun Sutton observed in 'The Largest Theatre in the World', youthful adventure scripts required fights, chases and outdoor movement. With early outside broadcast television cameras limited by length of cable from Alexandra Palace, it was logical to make use of established film technology to provide short sequences for insertion into drama programmes being broadcast live. The use of such film inserts not only gave greater flexibility and realism than false perspective sets or filmic back projection, it also allowed the next scene to be set up in the studio while the insert was running (a production breather, in effect).

Even when technological advances made it possible to pre-record sequences or whole programmes on videotape, film still had the advantage of being much easier to edit. At first, the only way videotape could be edited was by physically cutting the tape with a razor blade then splicing it together again, the whole operation carried



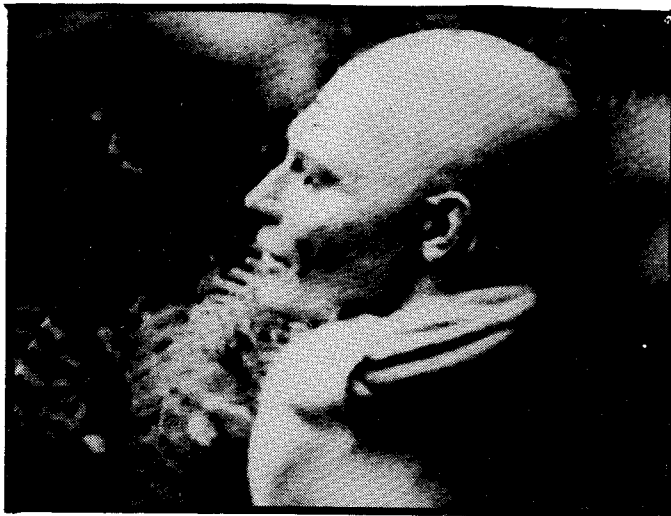
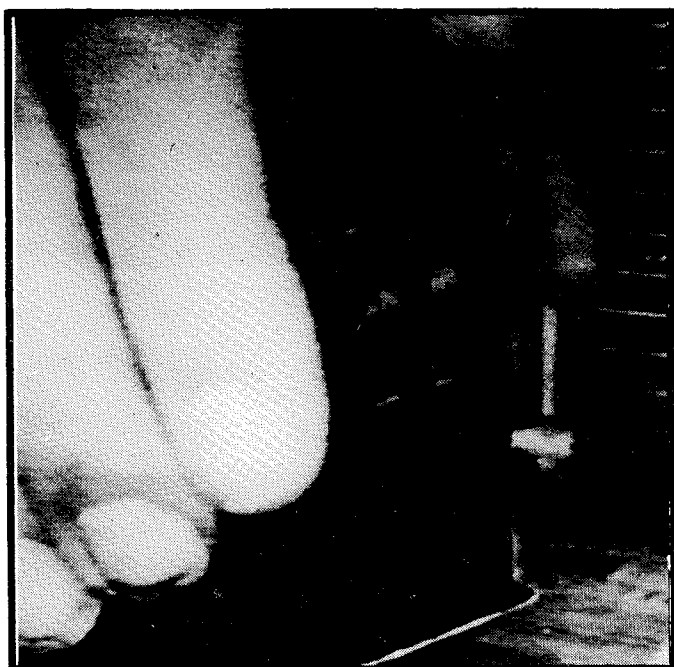
out by an experienced editor peering through a magnifying glass. Each edit took approximately ten minutes to perform and rendered the tape unsuitable for later reuse.

By the mid-Sixties, when electronic videotape editing became available, film was already well established as the preference for exteriors in drama; indeed, the 'realistic' drama of BBC programmes such as 'The Wednesday Play' (later 'Play for Today') was celebrated for tackling issues in the film medium, achieving not only a more natural performance but also a greater freedom for programme makers from in-production observation by potentially censorious executive personnel. Television OB had been demonstrated as popular for live current affairs and sports programmes, but early attempts at drama OB were hampered by the OB units' 'house style' for covering live events, which depended to a greater extent on the initiative of the cameraman and less on the scripting of a writer and director.

Film and video were thus being used together in television drama fairly extensively by the time 'Carnival of Monsters' was made. However, the two media look very different on screen, as can be seen when the Doctor and Jo move from the deck of the SS Bernice (film) into the cabins (studio) or from the Drashigs' domain (film) into the cave (studio). This can be accounted for by the fundamental differences between film and video and the different ways in which they are used during production.

Film is the recording of images on a one-off basis by chemical and mechanical means; video is the electronic registration of images onto magnetic tape. Film sound is recorded separately from the pictorial image and dubbed on later; studio sound is recorded on the videotape along with the image. Film has traditionally been single-camera, with each framed shot being lit separately according to what that image has to say when edited into the complete sequence; video, most obviously in the studio, is multi-camera, and a set is lit so as to allow the recording of a sequence of shots from several cameras whose pictures are selected and edited as live by the vision-mixer (and during this process there is the continual need to avoid shooting off the edge of the set or allowing in sound booms or their shadows). Location filming is traditionally completed before the studio work (following the Hollywood precedent), and to an extent defines the later performances. Studio performances are more continuous, and time is at more of a premium when it comes to the consideration of second takes, particularly if there is an effects sequence to be achieved live. Film has problems which cannot be so readily spotted as video,

BELOW: Vorg removes the TARDIS from the ship's hold - a CSO effect made possible by the advent of colour television.



ABOVE: 'Spearhead from Space' (Serial "AAA") was unique in that, due to a studio strike, it was shot entirely on film.

inflexibilities which are part of the filmic process: print 'sparkle', black lines and obstructions in the film gate can be discovered only when the 'rushes' have been developed. Studio tape, however, can be replayed at once, even to check continuity. Furthermore, tape accepts degrees of light that film will not, and a studio is a far more controllable environment than a location: Britain, after all, does not have a climate, it only has weather.

The particular differences in 1972 were also bound up with the growth of colour television (see 'The Black and White of Doctor Who' - Part Two). Whereas film had been working in colour since before television's birth, the BBC had been making colour programmes on a regular basis only since 1969. One consequence of the introduction of colour to 'Doctor Who' was that black-and-white Overlay effects could be dropped in favour of three colour CSO - a technique much in evidence in 'Carnival of Monsters'. This meant that there was no longer any need for sharp brightness contrasts in video effects shots; instead, sharp colour contrasts were required.

John Logie Baird had first demonstrated large-screen colour television in low definition in 1928, and the post-War BBC experimental television group had made use of the defunct Studio A in Alexandra Palace for experimental transmissions after closedown in 1955. America's CBS had adopted the 525-line NTSC colour system in 1953, and this was to form the basis of Britain's 625-line PAL system of 1966. The constraint in Britain was that the Television Advisory Committee had required any colour system to be available also in black and white on existing monochrome sets. And when colour drama was first transmitted, the "stale overlit shells" were flooded with the light required for PAL recording, such that the mostly-overhead studio lights produced a comparatively 'flat' image, albeit in a variety of garish colours (especially in historical costume dramas). Location film was able to draw upon a longer tradition of colour lighting and shot composition, and the contrast between studio and film images was understandably even more stark than it had been before. This is most apparent in 'Carnival of Monsters' where there is a simultaneous image comparison: Vorg's hand (on video) swatting the Drashigs (on film) is a good example of this, as is the film plesiosaurus viewed from the studio cabin.

As colour television techniques developed and video recording equipment became more refined, the difference in discernible picture quality between the sharp accuracy and 'presence' of video and the subtler, 'atmospheric' potential of film would become smaller. It is the starkness of video lighting which reveals the grey bald-wigs of the Inter Minorians so obviously in 'Carnival of Monsters', while the detail on the Doctor's jacket or the character Claire's dress is less noticeable on film than in the studio. However, 'Doctor Who' would continue in the Pertwee years to make use of film mainly for traditional purposes: effects shots and exteriors which were too difficult or too expensive to achieve in a controlled studio environment.



TECHNICAL NOTES

Jeremy Bentham



Everything in the script (and later in the novelisation) of 'Carnival of Monsters' was recorded. However, because every episode over-ran by at least five minutes, many whole sequences had to be lost. As Robert Holmes had scripted so tightly, a great deal of editing was needed to cover up the resulting gaps in the narrative (see page "66-07").

Live action filming for the story was done in two stages. First the team spent three days aboard an old wartime Fleet Auxiliary supply vessel berthed at the mouth of the River Medway to shoot the scenes taking place on the deck of the SS *Bernice*. Not once during their stay did the ship ever leave the harbour, so some clever camera angling was required to disguise the jetty on one side and the busy traffic of the Medway on the other. Then they moved to spend the final two days of the filming week on a marsh near Burnham-on-Crouch, which represented the Drashigs' domain. The scenery team had gone ahead the day before to set up the dummy foliage which turned a sandy gully into a cave mouth and broke up the otherwise totally flat landscape.

Jon Pertwee almost landed himself in trouble during the filming on the Medway. Knowing that the old vessel they were working on was shortly to be broken up for scrap, he made off with the ship's compass - an impressive, brass-finished instrument - thinking that this would make an admirable ornament for his home. What he didn't realise was that the compass was actually worth a great deal of money. When the ship's owners discovered that it was missing they took the matter up with Producer Barry Letts (who was of course present on location, directing the story). Knowing Jon Pertwee's magpie tendencies of old, Letts had little difficulty guessing who the 'offender' was, and as soon as Pertwee discovered his mistake he sheepishly gave the compass back.

Studio recording commenced a fortnight after the location work with a major emphasis on using CSO to its full potential. The opening model shot, for example, re-used a spaceship from 'Colony in Space' (Serial "HHH"), but on this occasion the model, complete with landing jets, stayed still, mounted on a pylon, while the caption slide background 'behind' it moved, courtesy of CSO. In the earlier story the model itself had moved and been shot in the traditional manner.

The copy of a 1926 'London Illustrated News' seen on board the SS *Bernice* hailed originally from the British Newspaper Library at Colindale, North London. The BBC retains a considerable number of these old newspaper and periodical faxes in stock from almost every era, although artists and production teams alike are exhorted to take great care of these expensive reproductions.

Aside from the Drashigs (see page "66-08"), one other, very simple, puppet was constructed for this serial - the plesiosaurus. This was little more than another fox skull covered by a sleeve of latex with cable controlled eyeball mechanisms wired into the head. Only required for a few CSO shots in the studio, the monster was simply operated by the puppeteer sticking his arm up through the sleeve and holding it in front of the camera as directed.

Costumes for the Inter Minorans were the creation of Jim Acheson, who took the unusual step of making the body suits from fibre glass to enhance further the creatures' image as a rigid, inflexible folk. Angela Seyfang of Make-up provided all the masks and appliances for the three officials and the group of Functionaries. The Functionaries' masks were all identical, rather crudely-fashioned affairs: this was partly symbolic of the

creatures' grey, uniform existences and partly a money-saving measure.

The guns carried by the Inter Minoran officials were static props - the firing effect was achieved initially by overlaying a blurred glow, then by deliberately feeding signal interference into the picture to make it warp and distort.

The Miniscope was a static prop constructed in the main from lightweight styrofoam and plastic sheeting. The script suggested that the "glo-sphere" section of it should be a large transparent ball into which the on-lookers peered, watching the 'shows' like plays on small 3-D stages - sophisticated holography, in effect. Unfortunately this presented too many technical problems and the team compromised by using mixed-feed CSO onto a flat, yellow screen.

A second 'melted' version of the glo-sphere was constructed and substituted for the original in the scenes at the end of the story after the Miniscope has been destroyed.

Most of the pictures which appeared on the glo-sphere were made up of at least three elements. This was the case in the sequence where Vorg looks at a fuzzy image of a Cyberman on the screen (the first time one of the creatures had made a live appearance in a Jon Pertwee story). Element one was the Cyberman, shot against a plain background. That picture was captured on one camera and fed through a colour monitor on the studio floor. This monitor picture (complete with curved edges and an option to make the picture roll, distort or go even fuzzier) was then shot by another camera - element two. Finally the composite picture was overlaid onto the live-action glo-sphere (element three) to form the finished effect.

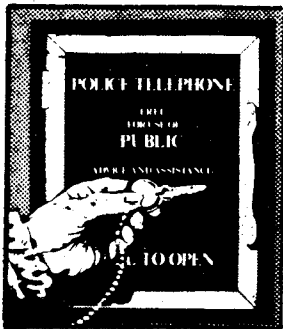
The Cyberman helmet used for these shots was one of those made originally for 'The Invasion' (Serial "VV").

The design of the inner workings of the Miniscope was based on sections of a printed circuit board. Although quite small, these sets were made to appear larger by the use of CSO in several sequences.

As is usual with serials directed by Barry Letts, several scenes and shots were post-recorded out of story sequence for later editing into the finished episodes. On this occasion, most of the post-recordings were close-up reaction shots from the cast. The only other major post-recording was the Drashig attack on the city. As only one puppet was ever used for this sequence, numerous takes were shot from various different camera angles to suggest that more than one creature had escaped from the scope.

As with 'The Sea Devils' (Serial "LLL"), Barry Letts found production of his show being scrutinised by cameras from another programme. The Features and Documentaries Department covered the shooting of episode one of 'Carnival of Monsters' for a fifty-minute show they were preparing, ironically on the subject of screen trickery (visual effects). They wanted to use an example of stunt illusions from 'Doctor Who', and chose the shot of Stuart Fell, playing a Functionary, tumbling from the overhead catwalk early in the episode.

A script extract from this serial was used by Malcolm Hulke in his book 'Writing for Television in the Seventies'. This was accompanied by a short introduction written by Robert Holmes himself.



PRODUCTION CREDITS



Stephen James Walker

SERIAL "PPP"

COLOUR

PART 1	Duration 24' 46"	27th. January 1973
PART 2	Duration 24' 16"	3rd. February 1973
PART 3	Duration 24' 51"	10th. February 1973
PART 4	Duration 24' 11"	17th. February 1973

CAST

STARRING:

Doctor Who.....Jon Pertwee
 Jo Grant.....Katy Manning

FEATURING:

First Officer John Andrews
 Ian Marter
 Vorg.....Leslie Dwyer
 Shirna.....Cheryl Hall
 Drum.....Terence Lodge
 Kalik.....Michael Wisher
 Pletrac.....Peter Halliday

WITH:

Major Daly.....Tenniel Evans
 Claire Daly.....Jenny McCracken
 Captain.....Andrew Staines
 Walk Ons.....Mohamed Shamsi
 Albert Moses
 Jagdesch Kumar
 Bill Lodge
 Aldwin Davies
 Peter Murphy-Grumbar
 Jo Murphy
 George Howard
 Rick Lester
 Terence Denville
 Bob Babenia
 Norman Commis
 Rudolph Ramil
 Double for Doctor Who....Terry Walsh
 Double for Jo Grant.....Linda Regan

TECHNICAL CREDITS

Production Assistant
 Chris D'Oyly-John
 Assistant Floor Manager
 Karilyn Collier
 Assistant.....Frances Alcock
 Technical Manager 1.....Clive Thomas
 Technical Manager 2.....Reg Hutchins
 Sound Supervisor.....Gordon Mackie
 Grams Operator.....Gordon Phillipson
 Crew.....No. 11
 Vision Mixer.....Bill Morton
 Floor Assistant.....Ian Pleeth
 Film Cameraman.....Peter Hamilton
 Film Sound.....Derek Medus
 Film Editor.....Peter Evans
 Visual Effects.....John Horton
 Stuntman and Fight Arranger
 Terry Walsh
 Costumes.....James Acheson
 Make-up.....Angela Seyfang
 Incidental Music.....Dudley Simpson
 Special Sound.....Brian Hodgson
 Script Editor.....Terrance Dicks
 Designer.....Roger Liminton
 Producer.....Barry Letts

DIRECTOR:
BARRY LETTS
BBCTV 1973