

SPECIAL SCREENING EVENT: *Colour and the Moving Image* conference, Arnolfini, Bristol

All the Hues of Nature Colour Film and Restoration

6-8pm, Friday 10th July 2009

The *Colour and the Moving Image: History, Theory, Aesthetics, Archive* conference is delighted to host a *Screen* 50th Anniversary Event which is presented in association with the British Film Institute National Archive and sponsored by *Screen* as one of the *Journal's* 50th Anniversary events. With live music composed by Jean Hasse.



The Open Road (Claude Friese-Greene, 1924 - 6) Courtesy of BFI Stills, Posters and Designs

GRANDE FÊTE DU CINQUANTENAIRE DE YOKOHAMA JAPANESE FESTIVAL (France, Pathé Frères. 1909)

7 minutes. Stencilcolour. Restored by the BFI National Archive. 35mm silent 18fps.

Introduced by Bryony Dixon (BFI National Film Archive)

Another striking example of Pathe's stencil colour process. The Festival of Yokohama was held in 1909 to celebrate the 50th Anniversary of the opening up of the port to foreign shipping. Prior to 1859, Japan had pursued an international policy of isolation. Under pressure in the 1850s it signed a series of treaties with Western Powers including America and Great Britain which marked the end of Japan's isolation. Over the succeeding fifty years Yokohama prospered as a port and industrial area. This Pathecolor film has been restored by the BFI using a 2k digital scan.

FILETTES DE BRETAGNE (France, Pathé Freres, 1909)

4 minutes. Stencilcolor. Restored by the BFI National Archive. 35mm. Silent. 18fps.

Introduced by Sonia Genaitay (BFI National Film Archive)

Filettes de Bretagne, a delightful compilation of rosy-cheeked babies in picturesque settings, is a stunning example of the Pathé stencilcolor process, also known as Pathécolor. Pathé introduced Stencilcolor in 1905 as a mechanised version of adding more than one colour to film, which has previously been done painstakingly by hand by painting one frame at a time. Between 1905 and 1910 Pathé became the powerhouse of the emerging film industry, making and releasing more films more often than any other producer by industrialising its production and processing facilities. Stencilcolour was part of this process.

Stencil-colouring was done by women in a laboratory in Pathé's studio complex at Vincennes in France. Stencils were made by producing several black and white prints of a film. One of the prints was projected frame by frame onto a screen, where an operator would outline elements within the frame to be coloured a certain colour. He traced the area using a pointer linked to a cutter which moved over the film strip, cutting out the relevant areas. By repeating this process with different areas of the frame a series of stencils for different colours were made. When the release positive release prints had been completed, they were then run through several dyeing machines, each with a different stencil - one for each colour - overlaid, so the colour would be applied through the holes in the stencils to the film. Stencilcolour films were certainly more expensive than ordinary black and white films, but less so than hand-coloured films by the likes of Georges Melies. They were also beautiful, as this example shows.

Stencilcolour is very difficult for archives to restore, the main reason being that the colours were added directly onto the projection prints. Projecting a film causes huge stresses on the film element and can also cause considerable damage; hence the likelihood of finding a good quality release print of a film from 1909 is slim. The flaws and damage on an original element are harder to conceal with photochemical reproduction, and when grading the film it is necessary to find a balance, since no part of the frame can be individually manipulated. The restoration of *Filettes de Bretagne* is a digital restoration done by the BFI National Archive as a 4k scan. Working from a duplicate negative struck from the original nitrate print, digital scanning allowed the restorer to manipulate the image one portion of the frame, and therefore one colour at a time, as well as to digitally remove scratching and damage. Once the restoration was complete, the material was printed onto modern polyester film stock.

L'INFERNO (Italy, Helios Film, Velletri, Dir Giuseppe Berardi, 1911)
minutes. Tinted. Restored by the BFI National Archive, 35mm silent. 18fps.

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Introduced by Josh Yumibe (Oakland University)

Early Italian cinema thrived on the production of prestigious, epic adaptations of classical literature, designed for exportation as well as aiming to bring 'high' culture to the masses. The film shown in this programme is the long thought lost (discovered in the Vatican film

library) 'other' version of Dante's *Inferno* made in 1911, to cash in on the box-office success of an earlier version of 1909 which was being remade in 1911 by Milano Films as one of the first longer running 'feature' films (recently restored by the BFI using the Desmet process and now available on DVD with a score by Tangerine Dream). The 1911 Berardi version shown here however was made in the countryside near Velletri by the Helios Company and originally ran at a more modest 20 minutes. It was released before the Milano version, and all that survives is this 12 minute fragment which has been restored, also using the Desmet process. There were four different versions of Dante produced in 1911, demonstrating the common film industry practice of rival companies producing versions of the same text. This version, as with the more costly Milano version, is tinted to add to the considerable spectacle already inherent in the images which have been taken directly from the illustrations of the *Inferno* by Gustav Doré. Despite being incomplete the surviving material tells a coherent story following Dante and Virgil down through the fiery pits levels of hell to its frozen heart where Lucifer sits chewing on the body of Judas.

PREKRASNAYA LYUKANIDA (Russian Empire, Dir. Ladislav STAREVITCH, 1912).

7 mins. Tinted. Restored by BFI National Archive. 35mm silent 18fps.

Introduced by Tom Vincent (Archivist, Aardman Animation)

The *Prekrasnaya Lyukanida* ('*Beautiful Leukanida*' or 'Beetles') is one of Ladislav Starevitch's stop-frame animations purchased by the BFI National Film Archive as part of the Joye collection in the late 1970s. Films from this collection such as Starevitch's '*The Ant and the Grasshopper*' (Russia, 1912) and '*The Cameraman's Revenge*' (Russia, 1912) were initially screened as part of programme dedicated to the director's work at the National Film Theatre (London) in 1983 following a revival of his work at the Ottawa Animation Festival in 1980. Starevitch (b.1890- d.1965) has been likened to Méliés and similarly described as a 'cine-magician' (Charles Ford, *Films in Review*, 1958) for his manipulations of deceptively life-like model beetles crafted from fragments of deer-skin, wire and wood and animated into the passions and (im)moralities of human impulses. As Jane Pilling notes, Starevitch's animations also offer 'affectionate satires and mediations on the forms and processes of cinema' such as voyeurism and spectatorship (NFT Programme, 1983). Simon Pummell describes Starevitch's retention of his artisan methods in combination with 'loosely shot vérité footage of the real world' in a series of films, which although unanticipated, now 'look increasingly important in the age of cinema as digital composite' (*Sight and Sound* 1995). The '*Beautiful Leukanida*' employs Starevitch's beetles to illustrate a medieval romance in which a king's daughter elopes with a reprobate suitor, a Knight from another land. The king finds them both in the garden, a sword fight ensues and the knight and princess escape across the water. The king pursues them and besieges the castle in which they reside, only to find that the daughter and knight ignite a barrel of gunpowder to evade capture.

The '*Beautiful Leukanida*' was coloured using tinting/toning and the preservation, funded by the BFI National Film Archive, was undertaken through digital scanning and then printed on to 35mm film.

THE OPEN ROAD (GB, Claude Friese Greene 1924-6)

Two sections, 6 mins each. Friese Greene Natural Colour. Restored by BFI National Archive. 35mm and Beta Sp. Silent. 18 and 24fps.

Introduced by Simon Brown (Kingston University, London)

Claude Friese-Greene was the son of William Friese-Greene. A prodigious inventor and patenter, William had been involved in the film industry from the beginning, claiming amongst other things that he held the master patent for what was then called cinematography, and demanding in 1909, unsuccessfully, that any and all companies working in the film business should pay him royalties. From the early Edwardian period, William spent a great deal of time, effort and money in creating a system for natural colour cinematography, the representation of a scene on film in its original, natural colours. His Biocolour process, unveiled in 1911, took two successive frames of a scene at twice the normal speed of 16 frames per second through a rotating red and green filter. The first frame captured the red elements of the scene on black and white film, the second the green elements. Once processed from negative to positive, the frames were alternately stained red and green, and then projected again at twice the normal speed, so that through the principal of persistence of vision the red and green images blurred, giving an accurate rendition of the colour of the original scene. Biocolour was technically problematic. The fact that the two images were taken successively, one after the other, meant that between the two images objects could move, which led to a problem with fringing, where moving objects seemingly left red and green ghostly trails behind them. Also, the system induced an annoying headache-inducing flicker. The rival Kinemacolor process – which had similar problems – tried to block the release of Biocolour films due to patent infringement, and although Biocolour won – leading to the demise of Kinemacolor – Biocolour disappeared shortly afterwards.

Friese-Greene continued experimenting, and after his death in 1921, his experiments were taken over by his son, Claude, who in 1923 unveiled his own Natural Colour Process, owned by his newly formed company, Spectrum Films.

The Natural Colour system was basically an adaptation of Biocolour which replaced the red filter with a clear filter. Thus the negative and the positive which was printed from the negative was alternately a record of the green and yellow elements of the scene. The green record was then dyed blue-green, and the yellow record red-orange, and the film was then projected at twice the normal speed. Initially the Natural Colour process caused great interest in the film industry. Demonstrations throughout 1924 to the trade and to the public led to very positive responses, with some claiming the system was entirely successful and superior to other colour processes emerging at the time.

Like his father, Claude Friese-Greene was a man with big ideas. After a number of test films he embarked upon motor tour of Britain from Lands End to John O'Groats, taking colour film along the way. His vision was to release some 26 short films, each detailing one particular leg of the journey, under the umbrella title of *The Open Road*. Like Biocolour, however, his colour process was also susceptible to fringing and flickering. Nine episodes were trade-shown in November 1925 to apparently favourable reviews but the project failed to develop further. Claude himself went on to become a respected cinematographer, working on films including the single Dufaycolor feature film, *Sons of the Sea* (1939), directed by Maurice Elvey.

In the 1950s Claude's son donated the original negative material to the then National Film Archive, now the BFI National Archive. These were unedited, out of order and contained only 'flash' (single frame) titles. In the 1980s the BFI went through the painstaking process of copying all these

original elements, printing first every other frame, then re-winding and reprinting the remaining frames to produce a final colour version that was half the length of the original and ran at 16 frames per second. After a highly acclaimed and successful collaboration between the BFI and the BBC on the series *The Lost World of Mitchell and Kenyon* (2004), *The Open Road* was suggested as a potential follow up project. The result in 2006 was a BBC/BFI co-production, *The Lost World of Claude Friese-Greene* (2006), in which presenter Dan Cruickshank re-created the original route taken in 1924. Following on from the success of this series, the decision was taken to use new digital technology to reconstruct 65 minutes of the original material was then digitally restored in 2007 and released by the BFI on DVD. As the restorer, Kieron Webb explains in the booklet accompanying the DVD of *The Open Road*:

“The BFI made new duplicating positives from the original negatives...which were then scanned at 2K. A digital intermediate stage separated the alternately filmed frames into two sequences representing the two colours. Motion estimation techniques were used to create new interpolated frames in order to retime the scenes at 24 fps. Each set of scenes were then given a red and cyan colour and combined, resulting in colour synthesis. The colours were based on the only existing nitrate print of *The Open Road* known to exist.”

In this respect the digital version of *The Open Road* represents more than just a restoration of the original process, since it changes and improves upon it, not showing modern audiences how it would have looked, but changing it to make it more attractive and palatable for modern eyes. Undoubtedly beautiful, this new version raises issues about the nature of film restoration – do we stay true to the original, or do we use new technology to improve it? In this screening we will be showing two versions of the same scenes, the first restoration from the 1980s, and the new digital restoration.

Hilversum (Netherlands, 1938) and Zeeland en Hilversum (Netherlands, 1939)

7 mins. 16mm Kodachrome Reversal. Restored by the Netherlands Filmmuseum. 35mm. Silent. 18fps.

Introduced by Giovanna Fossati (Filmmuseum, nl.)

These home movies taken by Mrs V. Pearce Delgado, an American living in The Hague, were discovered by the Netherlands Filmmuseum during their Home Movie Day in 2008. They contrast scenes at a traditional horse fair in Zeeland with images of the brand new modernist town hall of Hilversum, the Raadhuis van Hilversum, the masterpiece of architect, Willem Dudok. The films were treated to a logarithmic scan at 2K resolution on the Oxberry wet gate scanner using a LUT (Look Up Table) specifically designed for reversal film. Grading took place on the Nucoda Film Master which enabled close control of contrast and colour. The corrected data was written back to 35mm intermediate negative and from this a 35mm print struck.

MAKING FASHION (GB Humphrey Jennings, 1938)

15 mins. Dufaycolor. Restored by BFI National Archive. 35mm. sound. 24fps.

Introduced by Sarah Street (University of Bristol)

The director of *Making Fashion*, Humphrey Jennings, is one of the most celebrated members of the British Documentary Movement of the 1930s and 1940s. During the Second World War he was responsible for some of the most famous and important war-time documentary films, including *Spare Time* (1939), *Words for Battle* (1941), *Listen to Britain* (1942) and *A Diary for Timothy* (1946). Fundamentally poetic rather than realist, these war-time films weave together montages of image and sound in an experimental fashion to create a collage of life on the home front, and betray Jennings' profound respect for the British people as they pull together when threatened by a common enemy.

If these war-time films represent Jennings' most significant creative achievement, they belie the fact that in the 1930s Jennings was drifting from interest to interest, unsure of where to settle and what to pursue. He dabbled in painting, poetry, was a founder member of the Mass-Observation movement and designed sets for the theatre. He also tried his hand at filmmaking, working amongst other things with animator Len Lye on a short advertising film for Shell, *Birth of the Robot*, filmed using the Gasparcolor colour system. In 1937 the main spokesman for Gasparcolor, Adrian Klein, moved over to the rival Dufaycolor system, which unlike Gasparcolor was much more suited to live-action photography and therefore much more commercially viable. To promote the process Klein hired Jennings to make three films, using the Dufaycolor process, dealing with aspects of English life. He made three films in the winter of 1937-8, *English Harvest*, *Farewell Topsails* and *Design for Spring*.

Dufaycolor used a mosaic pattern of red and green lines overlaid at right angles with blue lines, called the *reseau*. This lay between the emulsion and the base of the film, which was exposed through the base, so that the light from the original scene passed through the *reseau* and registered on the emulsion as a full natural colour image. Unlike many colour processes developed in the 1930s it was relatively cheap, straightforward to use and required little or no additional equipment, just an ordinary camera, the Dufaycolor film, and special filters. It thus had great commercial potential. Its main drawback was that it didn't work very well in artificial light, making it very unattractive to studio based feature-film makers, but much more attractive to makers of documentaries and commercial advertising films.

Jennings' films were designed to launch the process by showcasing its possibilities. *English Harvest*, which was re-edited and released as *The Farm* in 1938 before being re-released as *English Harvest* in 1939 is a lyrical evocation of harvest time, while *Farewell Topsails* is a film which aches for the nostalgia of a bygone age, focussing as it does on the last voyages of the china clay Topsail Schooners, about to be replaced by modern mechanised ships. *Design for Spring* is a celebration of English design, dealing with the development of designer Norman Hartnell's spring collection. Released, or possibly only previewed, in February 1938, the history of the film is somewhat murky. Upon its release/preview, it was apparently criticised for being too much of an advertising film for Hartnell, and so *Design for Spring* was supposedly withdrawn and re-edited to downplay the Hartnell connection. It was re-released the same year, 1938, as *Making Fashion*. However, the copies of both films held at the British Film Institute are virtually identical. It appears to have been a substitution. When originally announced by Dufay-Chromex, Jennings was to make *English Harvest*, *Farewell Topsails* and an experimental film merging rhythm and colour, which was evidently dropped. Perhaps to appeal more to the advertising sector, it was replaced with *Design for Spring*, the choice of subject possibly motivated by the fact that Hartnell was at

Cambridge with Jennings, and they knew each other. The film is undoubtedly uncharacteristic of Jennings' work, being fundamentally in either version an advertising film for either Hartnell or Dufaycolor (take your pick) rather than an evocation of British life. It is, however, still beautifully filmed with a superb use of colour, showing here in a part-digitally restored version by the British Film Institute.

