From the early 1950s to 1988, Chester Burger documented people, cities and news events around the world in 35mm Kodachrome stereo slides. Mr. Burger recently divided the massive collection representing his years of stereo work between the New York Historical Society (just over 5,000 views of New York City) and the New York Public Library (over 14,000 views from the rest of the U.S. and worldwide). These are the first new images added to the library's 72,000+ collection of stereographs in over 50 years, and the first 35mm stereo slides ever to enter their collection.

Chester Burger took full stereo advantage of his employment in network television news, which sent him to locations and events that most amateur stereographers could only dream about shooting. He was able to photograph in stereo news and history-making events that few of us ever even see at a distance. (Several of his stereographs are seen in anaglyphic format in Amazing 3-D, Morgan & Symmes, Little, Brown & Co. 1982.)

In his professional appraisal of the collection, NSA activities vice president and photographica dealer John Waldsmith noted:

"This collection is all dated, titled and categorized. Mr. Burger's photography has a very straightforward quality with an eye for documenting the unusual and often overlooked subject. This is seen particularly in the street scenes in New York and other worldwide cities. We see nativetypes, street vendors, people at work, unusual storefronts, etc.

The New York City collection is of historic importance because much of what Mr. Burger photographed is now gone or dramatically changed. There are hundreds of images of neighborhoods long since demolished. The New York World's Fair (1964-65) section is the most complete collection known. Burger photographed almost every single building and exhibit and was able to make many photographs which appear to be no where else available. These were featured in the cover story for the April 1965 issue of Popular Photography.

The historically significant coverage of the 1952 presidential campaign is of particular value. This was the last campaign in U.S. political life that was conducted from trains with rear-end platforms. In addition to the two major candidates, there are excellent close, and often candid, views of the important political leaders of the time.

Note should be made of the atom-bomb tests at Camp Mercury, Nevada in 1953. Included is a scene of the actual detonation. Though photographed by the government, much of this was done on film other than Kodachrome. Much of this early 1950s photography has now faded or lost the color, making the Burger slides of great value because they retain the clarity of the original scene.

In the worldwide collection, special note must be made of the many scenes of obscure areas such as Afghanistan, the collective farms in Soviet Kazakhstan, Outer Mongolia and the remarkable coverage of Antarctica."

There are people, events and places skillfully documented in the stereo slides of these two collections which would delight most stereo enthusiasts, who generally assume that the 1960s, 70s and 80s escaped serious 3-D coverage almost completely. A quick scan of the basic inventory list in the appraisal reveals the wide scope of Burger's work. A random sampling of a fraction of the places and events covered includes the Bronx Zoo, Central Park ('78), World Trade Center construction ('73), Trump Tower ('81), an anti-nuclear demonstration ('82), Macy's Parades, Devil's Island ('66), Samarkand ('62), a Gay Pride Day parade ('83), Iraq, and about 600 slides of the Soviet Union in 1962 and 1985.

The people in Burger's views represent an equally wide variety of subjects and include Earl Warren, Robert Taft, homeless people, Andrei Vishinsky, Richard Nixon, journalists, Perle Mesta, a bag lady, Coretta Scott King, Ed Koch, Jimmy Carter, Harold Stassen, hippies, and Ronald Reagan. With its preservation assured, arrangements can eventually be made for the publication (perhaps in some future color SW issue) of more of this unique stereographic record, as well as for possible 3-D projection programs of dupe slides. Chester Burger, who retired from active photography in 1988, deserves the thanks of all who care in any way about stereo photography for his prodigious body of work and for his thoughtfulness in its preservation.
# Table of Contents

**Volume 18, Number 1**

**March/April 1991**

## In This Issue

<table>
<thead>
<tr>
<th>Article</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Les Theatres De Paris</td>
<td>4</td>
</tr>
<tr>
<td>by Paul Wing</td>
<td></td>
</tr>
<tr>
<td>Stereos Priced in New History/Collector's Guide</td>
<td>13</td>
</tr>
<tr>
<td>A Review by John Dennis</td>
<td></td>
</tr>
<tr>
<td>Illuminations of a 3-D Alphabet</td>
<td>14</td>
</tr>
<tr>
<td>by Carolyn Bartlett Gast</td>
<td></td>
</tr>
<tr>
<td>JIN: Stereo Magic from Spain</td>
<td>18</td>
</tr>
<tr>
<td>by John Dennis</td>
<td></td>
</tr>
<tr>
<td>The Atmosphere and the Earth in 3-D</td>
<td>21</td>
</tr>
<tr>
<td>by Dieter Lorenz</td>
<td></td>
</tr>
<tr>
<td>Learning to Love Lithos</td>
<td>32</td>
</tr>
<tr>
<td>by T.K. Treadwell</td>
<td></td>
</tr>
</tbody>
</table>

## Regular Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editor's View</td>
<td>2</td>
</tr>
<tr>
<td>Comments and Observations, by John Dennis</td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td>3</td>
</tr>
<tr>
<td>Reader's Comments and Questions</td>
<td></td>
</tr>
<tr>
<td>The Society</td>
<td>29</td>
</tr>
<tr>
<td>News from the Stereoscopic Society of America, by Norman B. Patterson</td>
<td></td>
</tr>
<tr>
<td>NewViews</td>
<td>30</td>
</tr>
<tr>
<td>Current Information on Stereo Today, by David Starkman &amp; John Dennis</td>
<td></td>
</tr>
<tr>
<td>View-Master</td>
<td>42</td>
</tr>
<tr>
<td>Information on the Reel World, by Wolfgang &amp; Mary Ann Sell</td>
<td></td>
</tr>
<tr>
<td>Classified</td>
<td>44</td>
</tr>
<tr>
<td>Buy, Sell, or Trade It Here</td>
<td></td>
</tr>
<tr>
<td>Calendar</td>
<td>46</td>
</tr>
<tr>
<td>A Listing of Coming Events</td>
<td></td>
</tr>
</tbody>
</table>

## Front Cover:

Scene 8 from Meyerbeer’s opera “Les Huguenots” as seen in one of the fine tinted tissue sets by BK of Paris. Few if any diorama views have attempted or achieved the quality or realism of these miniature stage scenes; stereographed, tinted and pierced with skill and precision over a hundred years ago. Paul Wing’s feature on “Les Theatres de Paris” examines several of these thin paper gems.

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Member, International Stereoscopic Union
Editor's View

Our third color issue features an interesting variety of articles, with an emphasis on vintage material which clearly needed illustration in color. This provides (in effect, if not completely by design) a measure of balance with the second color issue (May/June '89) and its emphasis on contemporary topics and images.

Tissues
One of our historical features, Les Théatres de Paris by Paul Wing, is illustrated with some of the finest examples of tinted tissues surviving from the French publisher BK. In a departure from tradition, the poor alignment of the images in relation to the stereo window has been largely corrected by cropping the reproductions in much the same way these otherwise fine views would be copied for projection. Without the distraction of the “floating edges” (some nearly 1/4 inch wide) the amazing quality of the figures, sets, photography, coloring and piercing can be fully appreciated. (Cropping was held to a minimum in order to present as much of the original images as possible. This left some window edges still less than less than ideal, but much improved over their treatment by BK.) The exception for these tissues does not signal any change in our general policy of illustrating entire views, framed mounts and all, in Stereo World articles.

Lithos
The feature on “Litho” views in this issue gives some long overdue and detailed attention to this variety of stereograph. Those inclined to dismiss views reproduced in ink as an inferior species of stereo animal should remember, along with the points made in Tex Treadwell’s article, that the older technology of lithography led the way toward the capture of photographic images themselves. In his classic 1864 photography text The Silver Sunbeam, John Towler reminded his readers: “It is a curious fact that experiments in photographic engraving gave rise to photography itself. The idea, the most prominent in the mind of Nicéphore Niepce, when he commenced his indefatigable researches in 1813, was not only to fix the image obtained by the camera obscura on a plate of metal, but to convert this plate into an engraving from which to receive prints by the press. After the partnership concluded between Niepce and Daguerre, this idea appears to have been abandoned; and an early death removed the former, the real originator of much that is valuable in photography, before he perfected the process which he left us.” (Besides being a leading photographic editor and writer of his time, Professor Towler was a member of the first stereo photography group, the Amateur Photographic Exchange Club founded in 1861.)

Lithography in its current form is of course what makes possible the reproduction of classic and rare stereographs in Stereo World, whether the original exists as an albumin print, a lithograph, a color transparency or a video image. While today’s lithography relies almost totally on refinements to the half-tone screen concept of the 1880s-90s, the “other” photomechanical reproduction techniques mentioned in the article are not without modern counterparts as well. “Screenless” photo printing methods, with resulting “grain” patterns in the ink looking much like the collotypes of the 1870s, have been developed to the point of compatibility with regular printing plates. (The earlier methods had to be printed on special presses and the resulting prints inserted into books just as with real photos.) Two recent examples are the book The Siege at Port Arthur (reviewed with details on the “GESH” process used in Nov./Dec. ‘87, page 32) and the book-set Hitler’s Empire (reviewed in Nov./Dec. ‘85, page 14).

Spaced
Far more recent than lithos or tissues are the synthetic satellite image pairs seen in The Atmosphere and the Earth in 3-D. The feature by NSA board member and European correspondent Dieter Lorenz reveals how data other than parallax differences can be used to generate 3-D images, and the heights from which such data can come. A variety of high-tech applications of 3-D imaging as visually interesting as those seen in the article are used in industry and research daily around the world, but few are ever published for people outside of specialized fields of work. The article is based on a presentation by Dr. Lorenz at the 1990 NSA convention in Manchester, NH.

Thanks
Thanks again to NSA member Dwight Cummings and everyone at Wy'east Color in Portland, Oregon for the generous contribution of color separation material and work which has again made possible a color issue of Stereo World.

Viewing the World
Two styles of inexpensive "lorgnette" type plastic stereoscopes are currently available for viewing the stereographs reproduced in Stereo World. There are also better quality glass-lensed viewers available, one of which is convertible for holding standard card views OR for easy viewing of pairs in books or magazines. For sources and prices (The NSA & Stereo World do not sell viewers) send a SASE to WORLD VIEWING, 5610 SE 71st, Portland, OR 97206. For tips on "free viewing" with no optical aid, send a separate SASE.
Questioning “Niagara”

The stereoview illustrated as Figure 8 in Mark DiLaura’s first Niagara Falls article (Vol. 17 No. 4) shows Blondin, not Bellini. It is by George Stacy (his # 99), and is one of several views of Blondin in the very large number of views of Niagara taken by Stacy before 1860.

Indeed, there is much of interest to students of early stereography in the many early photographic images of what was one of the most distinctive American landscapes before the opening of the western landscape to photography. The depiction of this landscape in stereographic form needs to be seen in the context of its depiction in prints and paintings, and the great repertoire of daguerreian (and ambrotype) images by Babbitt and others. DiLaura’s article omits much of the interesting work in stereo in the early period, not only of Stacy, whose output was perhaps the most extensive, but also Soule, Barnum, Heywood, Beckel Brothers and others. In addition (astonishing in the major American publication dealing with stereo) the work of the major early stereographic photographers that are mentioned is inaccurately described and undervalued. Babbitt is mentioned primarily as a daguerreotypist; his large output of glass stereo views is only treated as primitive — “framed in the typical photographic style of the time.”

While many (but by no means all) of the paper stereographs by Langenheim found today are faded, there is, as far as I know, no evidence that they were faded in their original condition. Yes, Langenheim was not commercially successful with his stereographs, but there is no evidence that this was because of “the poor quality...of the paper stereographs, and the primitive stereoscopes which could not be focused.” In addition, Langenheim produced many stereoscopic views of Niagara on glass which are unsurpassed in richness.

The London Stereoscopic Company published at least 27 (not 12) stereographs of Niagara Falls, although there is some question whether they were all taken by William England. DiLaura and others are referred to Tex Treadwell’s monograph on the L.S.C. published by the NSA(!) In what sense did these views “replicate” the “popular” views (why “popular” and imitated if they were of such poor quality?) taken from the same vantage point as those of the Langenheim Brothers? And what do collectors of early American stereography make of DiLaura’s depiction of Anthony having “seized the chance for profit from the distribution of large numbers of these views without attributing authorship”? Not to exempt Anthony from unsavory practices, but the firm was after all a publisher of views, and sometimes credited the photographer as they did Babbitt (as shown in DiLaura’s Fig. 4) and sometimes hired their own photographers to produce the views, as with Roche. In any case, as an admirer of the superb technical quality and rich photographic and stereographic interest of the early Anthony Niagara views, I wonder at the judgment that they “were generally not of superior quality.”

While DiLaura’s article concentrates on stereographers who were resident at Niagara, he omits mention of at least two important resident photographers, James Thompson and J.J. Reilly, who operated a studio at Niagara for most of the 1860s before moving to California in 1870. (See the excellent catalog on Reilly by Peter Palmquist.)

I feel especially compelled to point out these details because in your editorial you make so much of the scholarly nature of the research which “stretches the capacity of a publication like ours to near its limits.” First of all, we might expect Harvard University to have some lapses in its knowl-

edge of early stereography, but not the major American publication devoted to this subject, which has in the past contributed greatly to the scholarly understanding of this generally neglected area. Secondly, I am sure there are many members of the NSA who have not only contributed to the extension of this knowledge, but who would welcome increased rather than decreased exactitude and knowledge presented in our publication.

Larry Gottheim
Binghamton, NY

In the Vol. 17 No. 4 editorial mentioned, it was “material of this scope and length” which was seen as stretching simply the column inch capacity of the magazine, not research capacity. Despite any prior review, we will always depend on alert and knowledgeable readers like Larry Gottheim to point out lapses in research or mistakes in matters of identification or fact.

Mark DiLaura’s many subjective conclusions regarding artistic merit or technical quality, while based on lengthy research, represent a style not generally seen in Stereo World, and in fact it would have been disheartening if they had NOT stirred some controversy among earnest students of stereographic history. Other topics for spirited debate can no doubt be found in parts 2 and 3 of the series. (In fairness to both Mark DiLaura and Larry Gottheim, it should be noted that J.J. Reilly is mentioned and illustrated in part 3 of the series, which was published after Mr. Gottheim’s letter was written.)

Ed.

Share the WORLD

Many members sent copies of earlier Stereo World color issues to friends or associates likely to be interested in one or more of the features. Additional copies of this issue are $6.00 each from National Stereoscopic Association, Box 398, Sycamore, OH 44882.
The unusual French “tissue” views produced in Paris throughout the last half of the 19th century are printed on thin paper, colored on the back and often pin-pricked and knife-cut so that, when held to the light, the sepia view is miraculously transformed. The complete view is a four part sandwich. Die cut front and back frame pieces support the thin view. A tissue paper backing is added for protection and to enhance the element of surprise. (A feature on the theatrical tissues appeared in SW Nov./Dec. '82, and a few tinted tissues were reproduced in the Mar./Apr. '88 color issue.)

A wide range of these views were produced by various makers generally identified only by initials, if at all. Many, particularly outdoor scenes, are of poor quality but the best, as seen in these illustrations, are remarkable indeed. The only way to see these views properly is in a closed scope with an adjustable reflecting panel for front lighting, as was common in early Brewster designs.

Printed reproductions loose much of the sparkle and subtle effect achieved by varying the lighting to suit one’s personal mood. Around 1900, the French produced a black box with such a panel to fit a standard Holmes scope. (Chambre noir mobile.) In 1901, R. Y. Young patented a similar box in the United states which was sold with a viewer by the American Stereoscopic Co. of New York.

In a class by themselves were sets of views featuring dioramas of plays, operas and fairy tales. The field
was dominated by two producers, although a number of imitators competed for attention. The outstanding producer was BK, revealed only as “A. Block, Editeur”. This is the label under which the highly prized set of 72 scenes of the life of the devil in hell was produced. (See SW Mar./Apr. ’84.) Less common but much more interesting are the magnificent sets based on theatrical offerings on the Paris stage. There are 10 sets of 12, and 12 sets of 6, all in special storage boxes, covering a span of some 30 years.

An ad from an 1868 Anthony catalog (figure 4.) lists three of the sets of 12 at three price levels. The sets were sold as regular solid cards at $6 for plain sepia and $8 for hand colored views. The top price of $12 per dozen for the tissues, while below the cost of glass views, is generally double that of standard views. (Complete sets of the solid cards are now even rarer than the originally more expensive tissues.) Fine and complete tissue sets are rare indeed. I was fortunate recently to acquire several sets in a fairly late edition that are virtually mint. A Mexican label on one box indicates that they may have been purchased there in the late 1880s. The coloring and piercing are exceptional.

The BK dioramas bear the label “Les Theatres de Paris”. There was also a major competitor known only as JM who produced at least 17 sets of 12 scenes and 17 sets of 6. They are definitely a notch below BK in quality both in the settings and the coloring. (Details

Fig. 1. A scene from “La Muette” by Meyerbeer, mounted in one of the ornate, embossed early frames from BK.
on the cards and publishers appear in SW Nov./Dec. '82.)

Figure 2 (Act 4, Scene 6 from L'Africaine by Meyerbeer) helps show the construction of the tissues. The plain tan mount is typical of views published in the 1880s. Figure 3 shows the back of this same view, with the protective covering removed from one window to reveal the brilliant coloring on the back of the thin paper. The label on the right is a warning against copyright infringement.

L'Africaine (the African Lady), based on Vasco da Gama's attempt to circumnavigate the globe, reaches a climax on the island of Madagascar. L'Africaine, who turns out to be the local queen, had been brought to Portugal on an earlier unsuccessful voyage, and

Fig. 3. Back of the card in Fig. 2, showing the hand painted colors. On the right, the rear layer of protective/diffusing tissue paper has been removed.

Fig. 2. Meyerbeer's L'Africaine, Act 4 Scene 6. Vasco da Gama in the court of the African Queen. The left half of this view is illuminated only from the front, while the right is illuminated mainly from the rear, revealing the coloring on the thin photographic prints.

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**THEATRES OF PARIS.**

Nothing else hereafter been produced which shows the brilliancy of the Paris Théatres as well as this one. The Gregory's are the Paris Théatres as well as the Stereoscopic prints. They have a special value in the stereoscope. Included among them are the Opéra de L'Africaine, Rovert de France, Con- drillien and many others.

Per Set of 1 Dec., plain........................................... $5.00

" " illuminated............................................... 6.10

We have in addition to the stereoscopic prints in the Catalogue, an enormous variety on cards that cannot very well be described, varying in price from $2 to $4 per doz.

Fig. 4. From an 1868 E. & H.T. Anthony & Company catalog.
she had fallen in love with Vasco. She comes to realize that she cannot keep him, and that he really loves his regular girl friend, so she lets him and his party go home. Her despair is such that she commits suicide in true operatic tradition.

The yellow embossed card (figure 1) with a scene from Meyerbeer's opera La Muette (the Deaf Mute of Portici) is typical of the early mounts, although the majority have a more conventional rounded top. The initials B,D,L,H embossed in the corners do have some small significance, not yet fully understood. Figure 5 shows a late BK mount, a lithographed card
with a scene from Aida, a rare set of six views.

By the middle of the 19th century, Meyerbeer had become the undisputed monarch of the operatic kingdom. Les Huguenots (1836) was spectacularly successful. The opera is based on the bloody struggle between the Catholics and the Protestants in France during the 16th century, ending in the massacre of over 3000 Huguenots on St. Bartholomew's Day, 1572. The plot revolves around the lovely Valentine, daughter of Count de Bris, betrothed to the Count de Nevers, a Catholic nobelman.

Raoul, a Protestant nobleman, is chosen by the queen of France to marry Valentine instead of the Count. Raoul refuses her hand when he finds that she had been betrothed to the Count. Everybody gets mad, and they just miss coming to blows. In Scene 7 (figure 6) things have gone from bad to worse. A fight is about to start on the banks of the Seine between the Huguenots and the Catholics because of a challenge made by Raoul to the Count de Bris, Valentine's father. The fight is broken up before anyone is hurt, and Scene 8 (figure 7) takes place in the same setting, where the wedding of Valentine and the Count de Nevers is being celebrated.

In the meantime, plans have been drawn up by the Catholics for the slaughter of all Huguenots at the stroke of the bell of St. Germain. In the resulting mêlée, the Count is killed. Raoul and Valentine, who has renounced her faith in favor of his in an emotional aria, end up together. In attempting to flee, they run into a group of Catholics headed by her father who gives the unfortunate order to shoot them down. In this final scene (figure 8) the queen of France and the Count de Bris are gazing down on the terrible carnage.

Robert le Diable by Myerbeer was produced in 1831, five years earlier than Les Huguenots. It was a great success although less well known today. The story is even more convoluted, since it involves the Devil himself. Robert, Duke of Normandy was in fact sired by the Devil, who appears throughout the
Fig. 9.
Act 1, Scene 7 From Meyerbeer’s “Robert le Diable”. There seems to have been no hesitation to create as many "extras" as a scene required, each figure often having an individualized costume, expression and hair style.

Fig. 10.
Act 3, Scene 2 of “Robert le Diable” features the devil (Bertram) in the cavern of St. Irene and a lightning bolt, which was probably included, via the special-effects technology of the day, in the original Opera production.

Fig. 11.
"Robert le Diable", Act 3, Scene 7. In one of the most surreal images on any published stereoview, Bertram summons forth the ghosts of nuns in the ruins of a convent. Note the many levels of depth seen through the arches at right.
Fig. 12. A scene from “Cendrillion” in which the shimmering effect of rain is simulated by cuts in the left print along the otherwise simple dark lines.

Fig. 13. A Scene from “Der Freyschutz” by Carl Maria von Weber. Bold color enhances the scene of magic bullets being cast.

Fig. 14. Scene 4 from “La Favorite” by Donizetti. Careful coloring of the background enhances the exotic setting. Precise piercing highlights the figures’ jewels and costumes so well that, seen by transmitted light through a viewer, they seem to be wearing electric lights.
Fig. 15. Scene 2 from the extravaganza “Peau d’Ane” in which the three gowns appear. The stage show was based on the popular fairy tale which translates as “The Skin of the Donkey”.

Fig. 16. Scene 6 from “Peau d’Ane” re-creates an elaborate Paris stage set on the smaller scale of a BK diorama.

opera as the unknown Bertram. The Devil is ever busy trying to tempt Robert into misdeeds that will ruin him, and ultimately lead him to losing his soul to Hell. In Act 1 Scene 7, (figure 9) Bertram, in the black robe, looks on as Robert gambles away his belongings, even to the extreme of losing his armor.

Act 3 is filled with devilish magic, as in Scene 2 (figure 10) in the cavern of St. Irene, where Bertram is about to call up an orgy of evil spirits to whose company he promises to deliver Robert. Later in the same Act in Scene 7 (figure 11) in the ruined convent of St. Rosalie, he summons large numbers of ghostly nuns who have broken their vows during real life. They dance around Robert, tempting him with gambling, drink, and love. In spite of Bertram’s efforts, right finally prevails, and Robert and Isabel are united in a beautiful church setting, the final scene in Act 5 of the complex saga.

Figure 12 shows a water scene from the elaborate production of Cendrillon (Cinderella). In reality there was undoubtedly a pond on the theater stage, and real rain falling! Any relationship between this scene and the original Cinderella story would be hard to imagine, but nothing to worry about.

Der Freyschutz (The Sharpshooter) by Carl Maria von Weber tells the tale of Max, a forester, in love with Agathe the daughter of Cuno, the chief forester. Cuno favors Max, and plans to have him also succeed to the post of chief forester. To do so, Max must pass a special shooting contest. In this fantastic scene (figure 13) Max is entering into an unearthly contract with Caspar, a spurned suitor. Caspar is casting magic bullets, one of which is destined to kill Agate at the shootout the following day. I am happy to report that the evil spirit turned on Caspar who perishes, and love is triumphant.

La Favorite by Donizetti is a tragic love story set in Castile Spain about 1340. Leonora, the mistress of King Alfonso, really loves Ferdinand, now a soldier and hero of the realm. Ferdinand started out in a monastery. He loved Leonora but never knew she was the king’s mistress until the Pope issued a bull
A glass view of the Châtelet Theater in Paris, taken from the tower of St. Jacques during the time the productions in the BK sets were being staged.

(figure 14) telling the king to leave Leonora or be excommunicated. He did leave her, but disillusioned Ferdinand reentered the monastery. Leonora visits him there and dies in his arms.

Two of the sets of twelve depict scenes from extravaganzas based on well known fairy tales. One is titled *Le Peau d'Ane* (The Skin of the Donkey). Like other early fairy tales, the plot would rate at least PG-13, in that it tells of a king who wanted to marry his own daughter! The daughter goes to her fairy godmother who tells her to ask the king to have three gowns made: weather colored, moon colored, and sun colored. Much to the princess’ consternation, he produced them (figure 15). Later, he even killed the donkey that supplied gold for the kingdom, and in desperation, the princess, clothed in the donkey skin, left town amidst a number of strange happenings. The significance of scene 6 (figure 16) was not important. It was a thin excuse for another gorgeous stage set. The idea was to be able to show off the capabilities of the theater. The great theaters of Paris from about 1830 on had revolving sets, elevators, trap doors, and all the tricks of the modern stage—everything but dry ice and strobe lights!

There must be clues hidden somewhere as to the origin and history of these dioramas. Were they made one at a time, photographed and destroyed? What was the actual size of the sets? Did they represent fairly closely the actual scenes and costumes of the real productions? Some of the plays, particularly the fairy tale extravaganzas, had long runs. Were sets sold as souvenirs at the theaters? Who was Mr. Block, or for that matter, his rival JM? Perhaps this added information will catch the eye of someone who can shed some light on the problem. In the meantime, I continue to search for those sets needed to fill out the collection.

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24 Pages of Deep History

A Review by John Dennis

The latest work by 3-D comic book publisher Ray Zone is a short but completely serious and informative history of stereography from Wheatstone to 3-D video titled *The Deep Image—3-D in Art and Science*. Not a single superhero or voluptuous Amazon leaps from the pages, but the center section of the comic book format publication is filled with large, well printed anaglyphic reproductions of both vintage views and recent scientific and computer generated stereos.

Despite its large type and many illustrations, the rest of the book includes the basics of stereo history, View-Master, 3-D movie techniques, Vectographs, the Realist, 3-D comics, holography, etc. Fans of the many “3-D Zone”comics who have become curious about 3-D in general will be introduced to the long history and wide potential of stereo imaging through *The Deep Image*. Other information sources including the NSA are listed at the back. (Only the reference to the use of a “stereopticon” in two of the anaglyph captions presents the threat that this comic will corrupt youthful minds.)

*The Deep Image—3-D in Art and Science* by Ray Zone. 3-D Zone, 1991, Box 741159, Los Angeles, CA 90004, $3.95.
The publication of *Stereo Views: An Illustrated History and Price Guide* by NSA Vice President John Waldsmith marks one of those easily identified turning points in any area of interest or collecting. Whether such a marker helps cause a change or simply provides a directional signal is sometimes hard to know with certainty.

In the collecting of stereo images, the days of easily found bargains and gems have been over for some time, and a major collection of any size can involve an investment of real time and money. Many stereographs and viewers have become "investments" like other collectibles, the main difference being that few single items command newsworthy prices. Valuable collections are generally built from many individual views reflecting some specialized interest in a photographer, publisher or subject. But unlike most other collectibles, stereographs have had no single comprehensive listing or price guide easily available to the general public. Darrah's 1964 book as well as his 1977 book are out of print and were not marketed by a major publisher with wide distribution. A few antique price guide books have included listings of the most basic types of views, and books or articles on collecting photographica have covered views as a sub-category, but anyone wanting more detailed information needed to find sale lists from dealers, visit trade fairs or track the prices realized at auctions.

John Waldsmith's new book has now permanently changed that situation, moving stereo views more completely than ever before into the mainstream of organized collecting; no doubt for many people marking the end of whatever "innocence" remained to this unique field of interest. With the days of 50¢ views long gone however, serious stereo collecting could have ended up in an elitist situation due to the lack of any published guide to aid new or occasional collectors in buying or selling. The existence of a price guide gives even buyers and sellers of unequal knowledge and experience a starting point for negotiating a deal, and will tend to smooth out the overly high or low extremes. While any particular price mentioned in the book may of course be debated, the general effect should be to reassure those paying, for instance, $60 for a Muybridge view of Alcatraz that they aren't being ripped off, and to warn them that paying much more than $1 for a pirated view of San Francisco's Seal Rocks is unwise.

The wide scope and rich mass of detail in the book is in itself evidence of why no one since Darrah has attempted such a comprehensive history of views and their publishers, with or without the inclusion of prices. John Waldsmith's writing and editing experience, and his knowledge of both stereographic history and the current photographica marketplace make him one of the relatively few people on the planet capable of compiling such a book in the first place. Because he spent the time and effort to include so much historical background about stereography in general and each publisher and subject area specifically, the book is far more than just a catalog of prices – even though it may unfairly suffer the fairly quick obsolescence of anything described as a "price guide" and offered on the same shelf with books featuring "91 Edition" in larger type than the main title.

(Continued on page 20)
"A" was completed in 1981 while the author was still a scientific illustrator with the Department of Invertebrate Zoology at the Smithsonian. The painted and drawn parts of the image are watercolors and India ink on Bristol Board. © 1981 Carolyn B. Gast.

Illuminations of a 3-D Alphabet

by Carolyn Bartlett Gast

For thirty-one years I was a scientific illustrator peering through a stereoscopic microscope to make two-dimensional drawings of the beautiful, highly sculptured organisms that I saw. By analyzing stereographic pairs of Scanning Electron Microscope photographs, I found the principles of placement of matching details to achieve stereoscopic results.

Being a long-time lover of Late, High Gothic (almost decadent) medieval manuscript illumination and decoration, when my scientists were underwhelmed by my ability to make stereo scientific illustrations ("But nobody has ever done that!") I decided to dash off the letters of the alphabet, incorporating medieval elements and using stereo principles. This turns the letters into little sculptural forms; i.e., "A" has an imaginary.

"B" While overall widths of the originals vary, most of the image separations are spaced for freeviewing, with the central frame elements shared when the halves are fused. © 1982 Carolyn B. Gast.
"C" The shaped base for the gold leaf is formed from built-up and compressed typewriter correction fluid. The Cs are real rubies and sapphires. © 1985 Carolyn B. Gast.

"F" can be fused three different ways. The pearls are (temporarily) fake but the gold is real. © 1989 Carolyn B. Gast.
tension axis between the front and back round dots around which the rest of the letter is three dimensionally structured. Four years later, about two weeks before I finished “A” and was getting used to the disappointment of seeing the reality on paper contrasting with the wonderful image of it that I had held in my head for so long, an uninvited and unexpected visitor asked sweetly, “Well, if “A” took you four years, when do you think you’ll finish the whole alphabet?” The complete irrelevance and inappropriateness of the question startled me into questioning my motives and goals.

I found that I regarded each letter as a brand new opportunity to attempt to produce a wonderful bit of fantasy, and that I would never settle for anything less than right regardless of the time involved. “B” took me six years, but before I stopped being a scientific illustrator in 1985 I had completed “All Over Alphabet” just in case anyone asked that particular question again.

“All Over Alphabet” is a unique stereo image in more ways than may be evident at first. Fuse the spots at the top to see the vines with their crop of letters in 3-D, then turn the page on its SIDE and fuse the other spots. The work incorporates pairs for both horizontal and vertical fusion! © 1984 Carolyn B. Gast.

“GME” is an illuminated monogram made for a special presentation but it clearly shows the “depth” potential of this truly mixed media format. © 1981 Carolyn B. Gast.
I have exhibited them in my retrospective exhibition at the Smithsonian's Museum of Natural History, at Northern Virginia Community College's Tyler Gallery and at the Cosmos Club in Washington, D.C. Eventually I plan to have a portfolio of quality reproductions made to accompany future exhibitions.

"GME" is a personal monogram that was presented to the outgoing national president of Artists Equity, which adopted the logo (outlined by the floral design) during her tenure. I painted the ivy leaves dark to light in reverse on the two corresponding images, and when I finally viewed them stereoscopically the leaves fluttered so wildly they made me seasick. I calmed them down by adding identical white lines along their stems.

Once, by accident, I painted two different colors on corresponding areas and when viewed together the area glowed as if lit from behind. I've been trying to re-achieve this "luster" ever since, with only moderate success, which is why I've painted blue, violet and turquoise against each other in "A"'s flowers. (Note the lower blossom on the center vine.)

"G" is a more dramatic medieval fantasy which leaves only the question; is the G for George?
© 1990 Carolyn B. Gast.
Very few people are aware that a totally unique variation on the 3-D “tissue” views of the 19th century existed during the 1950s. Not only were the images on paper to be viewed by transmitted light, but the pairs were in sequence on vertical rolls to be advanced through the viewer as if reading an ancient papyrus scroll.

This one-of-a-kind stereo format bore the magic sounding name JIN, and was a product of Estereoscópicas JIN in Barcelona, Spain from 1954 to 1959. All the images were 3-D drawings, 12 pairs to a roll, comprising children’s stories from classics like Aladdin to Disney features like Bambi. The stereo drawing art on these rare paper “filmstrips” is among the best to be found in any format from any time or source.

There seem to be as many planes of depth as needed for any particular scene, and even some very small objects and faces are done in two or more carefully controlled planes with almost no exaggeration of shifted hats, noses or arms. In most of the scenes, one or more features are drawn in fully rounded looking 3-D with diagonals that pass smoothly through surrounding planes of depth, as with arms, swords or architectural details. All the drawings are by stereo artist Joan Nieto Gras.

The deep saturated color is printed in solid unscreened ink over the outline drawings, so the 30x40mm images are clear and colorful when illuminated from the back and magnified by the viewer. Only the fiber of the paper itself interferes at all with viewing the well aligned pairs. No diffusers are used and the rolls are a single layer of paper. (In fact, the images are more impressive when viewed by reflected light but the viewer allows light in only through the back of the strip.) Black printed borders clearly define each frame and outline the stereo window, which is treated with a respect matched by few other publishers of 3-D children’s stories. Unfortunately, some of the story rolls suffer from poor printing register of the colors, which mars the otherwise excellent 3-D imaging.
The lightweight and very crude Cuban version of the JIN viewer. "Made in Cuba" is molded into the inside of the septum on the hinged cover.

If the quality of the art work is impressive, the JIN viewer is built like the proverbial brick chicken house. The heavy red plastic body holds the long focal-length lenses in perfect focus and alignment for easy viewing, and their diameter is large enough to accommodate eyes of most spacing. The inside of the body is painted black to avoid reflections or color influences from the red plastic. The guide slots for the spools (which are glued to the ends of the story rolls) allow smooth insertion and winding of the four inch wide scrolls. Two soft pads in the center provide just enough tension on the paper for accurate alignment and straight winding when the cover is snapped shut. The name JIN was derived from that of designer Eugeni Jordana Pareto and artist Joan Nieto Gras. The name's association with exotic middle eastern myth tied in well with the classic stories the system featured.

Despite all the care in design and construction, inserting the rolls must have a challenge for many children, and parents must have spent considerable time and effort repairing tears and re-gluing scroll ends to the spools. Normal use was probably enough to completely wear out most of the copies of the 24 different story rolls issued, making them one of the more rare stereo items seen today. There were four different series of stories, each with its own color coding on the box and on the plastic knobs of the spools. According to Mr. Pareto, about 50,000 of the viewers were sold during the five years they were produced.

If the existence of a unique Spanish 3-D system is a surprise to many collectors and stereotrvia enthusiasts, how about one from Cuba? The JIN was marketed mainly in Spain, Cuba and Costa Rica, and at some point a cheaper Cuban version of the viewer was produced. The Cuban version with its inferior lenses is closer to what
one would have expected, on first hearing of a viewer for children’s stories lithographed on thin paper rolls. The lightweight body has no septum or black paint inside, and the crude spool guides and cover hinges make it feel like a paper shredder whenever a roll is advanced. As far as known, no story scrolls were produced in Cuba.

Mr. Pareto, through his firm Techniques Stereoscopiques, has remained involved with 3-D imaging, especially through research into autostereoscopic projection and video technology. With artist Gras, he is also considering the possibility of a very updated version of the JIN. If it matches to any degree the craftsmanship of the original system, it will be well worth having whether or not it achieves wider commercial success.

**JIN Paper Story Rolls**

**Blue Series**
1. La Ratita Presumida
2. La Lechera
3. Blancanieves
4. Caperucita Roja
5. La Hija del Molinero
6. El Flautista de Hamelin
7. El Gato con Botas
8. Cenicienta
9. La Hechicera del Bosque
10. Las 7 cabritas y el Lobo

**Yellow Series**
1. Los 3 cerditos y el Lobo
2. Los sobrinos de Donald
3. Mickey Detective
4. Bambi
5. La Cigarr y la Hormiga
6. Peter Pan (I)
7. Peter Pan (II)
8. Peter Pan (III)
9. Pinocho (I)
10. Pinocho (II)

**Red Series**
1. Aladino (I)
2. Aladino (II)
3. La alfombra mágica

**Maroon Series**
1. El País de las Maravillas

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**New SW Ad Rates**

Beginning with Volume 18, rates for inserts and display ads in Stereo World will be as follows:

- One sided inserts printed by SW... $105. per page
- Two sided inserts printed by SW... $140. per page
- Preprinted inserts.. $65. per page

Full page display ad ........... $125.
1/12 page display ad ........... $15.
1/6 page display ad ........... $25.
1/3 page display ad ........... $50.
1/2 page display ad ........... $70.
Hyperstereos from Ground, Air and Space

by Dieter Lorenz, German Aerospace Research Establishment, Oberpfaffenhofen

It is well known to stereoscopists that man’s ability to distinguish his surrounding environment in all three dimensions is limited to a distance of about 50 to 100 meters. This is caused by the relatively small separation between the eyes, which is more or less 60 to 70 mm. Views from the ground to more distant objects, as well as from high elevations and even from space, lose the sensation of depth. The distant image becomes flat. In stereo photography however, one can use two monoscopic cameras and separate them by nearly any distance to make hyperstereos instead of using a normal stereo camera. In this way even clouds can be visualized three dimensionally.

In principle making hyperstereos is relatively simple. The task becomes somewhat troublesome when one wants to make hyperstereos of clouds, photographed simultaneously with two identical cameras which are positioned well apart. Two cameras, two operators and synchronization are necessary. Figure 1 is an example of such a stereo picture showing the view from the Hohenpeissenberg in Upper Bavaria over an extended fog layer to the Alps.

Another, much easier way to make hyperstereos of clouds is for a lone photographer to take two shots in succession while riding in...
a car or on a train or aircraft, thereby producing the separation, the stereoscopic base. In this case, the photographer must observe two key points: the film in the camera has to be parallel to the motion of the vehicle, and the time interval between the two shots (the stereoscopic base) has to be compatible with the photographer’s speed and the distance from the clouds. If the distance is too small, one will not get a spacial impression; if it is too large, one will not be able to view these pictures stereoscopically. In the case of moving or changing subjects, as clouds are, the time interval between the two shots should not be too long, otherwise the objects could change their position or shape too much.

When photographing these stereo pairs from the ground, one has in addition to take care that other objects do not pass close to the car or train. These would cause an excessive parallax or unwanted objects appearing in one frame only. Figure 2 is a stereo pair showing a field of fair weather Cumulus clouds which was taken from a train over a time interval that gives the pair a relatively large stereoscopic base.

When the distances to the clouds or to a layer of fog is small enough, the photographer can walk a short distance between the two single frames. Figure 3 is an example of such a hyperstereo, taken from the balcony of a house using its full length as the base. One sees clearly that only the fog layer is three dimensional. The clouds above are too far away and look “flat” because the base is too small for them. The next hyperstereo (figure 4) has a somewhat curious appearance. Only the Cumulus clouds are 3-D; the landscape and the houses in it are flat and seem to be far away. This is because the stereo base on the ground was zero, meaning that the scene was photographed from the same spot. The stereoscopic effect was produced not by movement of the camera, but rather by the movement of the clouds. Clearly the ground is not 3-D since it is unchanged in the two frames.
Again Cumulus clouds can be seen in unstable cold air over the North Sea.

In figure 5, photographed from a helicopter over the Swiss Alps, both mountains and clouds appear in 3-D. Again the cloud is Cumulus, the most impressive type of cloud for spatial viewing. Especially evident from the 3-D effect is the way in which the clouds develop over the sun-exposed slopes near the tops. These are the areas with the highest temperature differences between the surface and adjacent atmosphere, and thus ideal for the growth of Cumulus. Figure 6 was taken from the next strata of the atmosphere. One looks down from an airliner over Cumulus and Cumulonimbus clouds. Again, the stereo base was caused by the movement of the aircraft.

Hyperstereo from space is also possible using the same method as from an aircraft. Figure 7 was shot on December 5, 1983 at 0902 UTC from the NASA Space Shuttle with a photogrammetric camera supplied by the European Space Agency (ESA) in connection with the German Aerospace Research Establishment (Deutsche Forschungsanstalt fuer Luft- und Raumfahrt, DLR). This black and white pair is a vertical scene of a part of the Inn Valley, the surrounding mountains of the Alps and the northerly adjoining plateau. Close to the left edge of the picture, the well known Zillertal is to be seen. Where the river Inn leaves the mountain area there is an interesting fog layer with waves caused by the cold air flowing down the valley. The atmospheric layers above are free from clouds.

These photos were taken from a low orbit (250 km) in which manned spacecraft operate. Unmanned spacecraft, especially weather satellites, fly at much higher altitudes. There are two preferred orbits (see figure 8): one between 800 and 900 km in which the satellites fly around the earth, more or less over the poles in about 90 minutes (so called polar orbiters), the other on an equatorial orbit at a height of nearly 36000 km. At this distance the cycle is 24 hours, the same period as the earth cycle. Therefore, these satellites
have an apparent fixed position over the equator and so are named geostationary satellites. These are, e.g., the American GOES and the European METEOSAT.

The question is, how can stereo pictures be made at these large distances. In other words, how can the large stereoscopic base necessary be obtained? A first possibility is to use the pictures from two neighboring geostationary satellites, such as GOES West and GOES East (figure 9). Their separation is large enough for a stereoscopic view, and the areas on the earth, as seen from these satellites, do overlap. This method was practiced at the University of Wisconsin at Madison more than 10 years ago. But it is a complicated method limited to two satellites of the same type and to areas near the equator. Therefore, it did not become routine.

There is, however, a much less complicated method to produce stereoscopic pictures from weather satellites, called “synthetic Stereo Imaging”. It makes use of information about the height of the clouds which is received from the satellite’s infrared channel. All weather satellites have this channel for viewing the clouds at night. This channel’s signal depends not on the brightness of the clouds, as in the visible channel, but on their temperature. From other data sources one can determine the atmospheric temperatures versus height and thus the cloud’s heights by using the already mentioned correlation between the IR signal and temperature.

Satellites transmit their data in picture elements, so called pixels, to the ground where a computer combines these to make a full picture. This computer allows extensive manipulation. It can produce two images in which the pixels are shifted depending on their height. This means that parallaxes are generated by the computer. The result is a pair of stereoscopic pictures. This method was first used in the U.S. by Pichel, Bristor and Brower in 1973, and later taken over by the German Aerospace Research Establishment (DLR). The principle is to be seen in figure 10. In the upper part, a cross section is drawn showing the ground and three cloud layers above. The arrows in the two lower pictures show the
extent to which the pixels have been shifted in relation to their height. These are the parallaxes for each of these layers which determine the stereoscopic frames. In reality, this method is not as simple as it looks, because further problems must first be solved. These difficulties can arise when two or more pixels fall on the same point. The computer resolves this by selecting the pixel of the highest cloud; all others are excluded. The computer runs into trouble as well if a pixel is removed and no other fills the vacant position. To plug these "gaps", an intelligent algorithm has to be found by using the neighboring pixels. (The author thinks that the reader should not be burdened with more details here, but instead should study the results.)

These synthetic 3-D images are focussed mainly on Europe, since the main field of interest of German Aerospace, which contributed these pictures, is naturally the European continent. Figure 11 is a segment of the total view from northern Africa to near the North Pole, as seen from the European geostationary weather satellite METEOSAT-2 on April 27, 1985, 1130 UTC. One can see high-reaching clouds over north Africa clearly differentiated in height, the clouds of a frontal system spreading out from a low over Scandinavia, and many other details the description of which would take too much space here. The resolution of height is intentionally exaggerated. Figure 12 of July 12, 1984 is a much smaller segment, also from METEOSAT-2 reaching...
Fig. 11. Synthetic stereo image of the cloud situation over Europe and northern Africa on April 27, 1985, 1130 UTC from METEOSAT-2 data. Data: ESA/ESOC, image processing: DLR.

Fig. 12. Synthetic stereo image of the Munich hail storm on July 12, 1984 at 2000 European Summer Time from METEOSAT-2 data. Data: ESA/ESOC, image processing: DLR.

Fig. 15. Stereoscopic view of the Inn valley around Innsbruck with direct sun illumination on December 5, 1983 at 1200 UTC based on terrain model data. Computation and imaging: DLR (Dr. H. Mannstein).

west-to-east from France to Poland and north-to-south from southern Scandinavia to southern Italy. The “blow-up” of the image has approached the limits of the METEOSAT resolution so that the structure of the pixels has become visible. The interesting feature here is a large Cumulonimbus tower, a so-called “hot cell”, in the middle of the picture. It is the second one in the row of cloud which is positioned north-east to south-west. This cloud mass caused the most damaging hailstorm over southern Germany ever, in terms of the compensation which insurance companies had to pay out. The towering cloud attained its greatest force at 2000 local summer time when it was right over Munich, as this picture shows. The torrent of hailstones injured many people, as well as denting cars, breaking windows and damaging roofs and even the walls of houses.

As a tool for interpreting weather events, synthetic stereo possess a special advantage: the parallax can be changed and thus adapted to special requirements. Figure 13 was compiled using data, received on October 13, 1981, 1248 UTC from the polar-orbiting U.S. satellite NOAA-7. The resolution of this image is high because of the lower orbit of this class of satellite, and so one can almost distinguish single clouds. On the rear side of a low over southern Scandinavia a deep layer of cold maritime air was moving across central Europe, causing widespread Cumulus and Cumulonimbus clouds with rain and rain showers. The same picture appears in figure 14, but this time the parallax has been changed so that the stereo base has been widened threefold. Compared with figure 13, the spatial effect is greater, with the clouds appearing to be extended in height.

Where the sky is cloudless the surface of the earth is in full view. The data recorded in a satellite’s visible channel gives the impression of what one would see with the eyes from space, while the IR data represent the temperature distribution on the earth’s surface. Such pictures, however, are normally not in stereo but flat, and this often makes the interpretation
difficult Synthetic stereoscopic methods can help to avoid these difficulties by the use of so-called digital terrain models. These are collections of data, stored in a computer, which associate every point of the terrain with its geographical coordinates and its height. In other words, it is a digitally stored map which can be plotted on a screen or on paper. Synthetic stereo methods also allow this plotting to be done in 3-D.

However, more information can be added to the terrain model. For every point of the terrain, for example, one can calculate how it will be illuminated by the sun according to the season and time of day. Figure 15 is a synthetic stereo image showing how part of the Inn Valley and its vicinity would have been illuminated by the sun on December 5, 1983 at 1200 UTC. Although artificial, this image already looks like a stereo view from space. One sees the place where Innsbruck is situated (but not the city itself since the buildings are not included in the terrain model), the Zittertal and so on.

Another option is to add satellite data to the data of the terrain model, e.g. the temperature of the earth’s surface from the IR channel of a weather satellite. Figure 16 is an example for this for the central Alps. One can identify the Inn Valley and the Pinzgau in the north and, among others, the valleys of the rivers Adige and Drave in the south. The colors indicate the surface temperature derived from the IR channel of NOAA-7 on September 11, 1985, 1406 UTC. They range from red for higher temperatures and descend through orange, yellow and green down to dark blue. One sees not only that the surface temperatures are typically warmer in the valleys and cooler at the summits, but also that the southern sun exposed slopes have temperatures similar to those of the plains, while the highest northern slopes which are snow and ice covered, have temperatures of 0°C and below. The terrain in this picture looks somewhat square-edged. This is caused by the fact that the geometric resolution of the NOAA satellite is only 1 km

and thus much coarser that that of the terrain model.

Aside from the polar-orbiting weather satellites, there is another group of (also polar orbiting) satellites which provide images with a higher geometric resolution, but with a much lower repetition rate: the Landsat system. Figure 17, although only in black and white, shows a much smoother surface temperature distribution for the southern part of upper Bavaria including the terrain around Ober-
amergau, Garmisch-Partenkirchen and lake Walchensee. The lighter patches are the warmer southeast slopes which are exposed to the sun. The shaded areas represent the cold slopes which face northwest. The waters of the lakes and rivers are also cold and therefore shaded.

Figure 18 is a special 3-D treat: the visible channels of the same Landsat image presented as a synthetic stereo picture in natural colors. As in the last picture, the image is the southern part of upper Bavaria with Garmisch and Zugspitze in the south, the river Lech in the west, river Isar in the east and the southern end of Lake Ammersee in the north. The geometric resolution of this picture is remarkably high. The combination with the exaggerated 3-D effect makes details of the topography visible, details which one would never discover in a ‘flat’ picture.

Fig. 16. Stereoscopic map of the surface temperature distribution of the central Alps on September 11, 1985 at 1406 UTC compiled from NOAA-7 IR data. Color scale is from blue at -5°C to green to yellow to red at +30°C. Computation and imaging: DLR (Dr. H. Mannstein).

Fig. 17. Stereoscopic view of the surface temperature distribution of southern Upper Bavaria on August 13, 1985, 0900 UTC from LANDSAT TM data. Black = warm, white = cold. Computation and imaging: DLR (W. Knöpfle).

Fig. 18. Stereoscopic view of southern Upper Bavaria in natural colors from LANDSAT TM data on August 13, 1985, 0900 UTC. Computation and imaging: DLR (W. Knöpfle).
The Society

The arrival in February of the 1991 NSA Directory, bigger and better than its predecessor, and with many more registered stereophiles than ever before reminds us that we cannot assume all Stereo World readers know what the Stereoscopic Society is and does. Steady growth of the NSA membership requires that we regularly state at least the basic facts. The Stereoscopic Society of America is a group of active stereo photographers. A prerequisite for joining the Society is NSA membership. One does not have to be an expert stereographer. We are all learning and hoping to improve the quality of our stereographs. We do require a prospective member to demonstrate an adequate degree of interest by presenting actual stereo views in the appropriate formats prior to joining one or more of our groups which circulate folios. Current circuits for Realist format transparencies, 35mm 2x2 matched-pair slides, and prints on 3 1/2 x 7” viewcards are in operation. Perspective members should write to the address listed at the end of this column.

In the December 1990 issue of the International Stereoscopic Union journal Stereoscopy, John Waldsmith has a nice article titled “Print Making – A Lost Art?” After reviewing the origins, worldwide demise, and eventual rebirth in America of stereo printmaking, John answers the question posed in the title... (i.e. a new generation of enthusiasts has revived and restored the print format to health). John is a longtime member of the Society, and a founding father of the NSA, and the pioneer editor of Stereo World.

A Stereo Void

It has been several months, as of this writing, since the death of Louis Smaus. Much has been said and written of Lou’s role in the NSA and his contributions to stereoscopy. The Nov./Dec. Stereo World stated it all very well and I can add little to the accolades or embellish his accomplishments. There has, however, been time after the initial shock of losing Lou to contemplate what was unthinkable... a Stereoscopic Society without Lou Smaus.

Lou was my first real contact in the Stereoscopic Society when I entered the fold in 1977, and most of what I learned about the operation of postal folio circuits I learned from Lou. There was only one circuit in those days – what is now known as the Alpha Transparency Circuit. The print folios which traveled overseas, failed to return. (Actually, a couple did show up eventually ten years late.) Fred Lightfoot was the general secretary and Brandt Rowles served as treasurer. Before I knew what was happening, Fred had retired,

(Continued on Inside Back Cover)
Q-DOS: So Near and Yet...

The soon-to-be-test-marketed Q-DOS lens system from Vivitar has been covered in the Sept./Oct. '90 and Nov./Dec.'90 NewViews, but this color issue may be the only chance many will have to see what one of the resulting prints looks like. The system has the potential of making easily viewed, full color anaglyphic portraits as easy as picking up your SLR. It also has the potential of seriously frustrating anyone expecting real depth in every frame after sticking a Q-DOS lens on their camera and shooting a few rolls of vacation pictures.

Cyan and red filters covering most of the left and right halves of the optical center of the lens produce anaglyphic “fringing” colors on the out-of-focus parts of the image. When a slide or color print is then viewed through anaglyphic glasses, objects in front of the zone of sharp focus appear slightly in front of the frame. The background, to the extent that it is out of focus, recedes slightly behind the frame. The larger the aperture used and the closer the subject, the more depth will be seen. But in order to get enough anaglyphic separation for the depth normally expected in a 3-D close-up, the near and far objects would have to be so out of focus as to be unrecognizable — and in any case, the lens can provide “separation” only to the extent of it’s widest aperture.

The sample here shows about the optimum depth possible while maintaining reasonable overall focus. With the limitations of the Q-DOS lens in mind, elements clearly in front of and behind the close subject in focus were included. The diffuse lighting allowed the use of a relatively wide aperture and also limited contrast, which helps keep the anaglyphic “fringe” colors from ghosting. The result is a pleasant image with obvious depth, but less than an actual stereo pair, incorporating anything near a normal parallax shift, would show. Q-DOS samples taken from more than five or six feet from the nearest subject show levels of depth just barely detectable and the people have a flat, cardboard cut-out look. Portraits taken closer than this example however, show rounded multi-plane depth in the face and a fairly deep background, especially when the subject’s head nearly fills the frame. Such pictures may be the best application of the Q-DOS system. (They certainly lack any of the exaggerated depth that a standard stereo camera can produce in close portraits.)

Any anaglyphic glasses will work to view the prints, but saturated red/blue or red/green filters will wipe out most of the other color.
The light cyan filter used in the Q-DOS glasses supplied by Vivitar has little effect on overall print color and doesn't require strong light for easy viewing. The problem of course, is that people take so many photos in high contrast direct sunlight, which affects the anaglyphic fringes along with the rest of the image. The trade-off was to protect the bright, natural colors in such images by using lighter filtration at the expense of the ghosting such filters allow when the intensity of the fringing overcomes the canceling ability of the pale filters. As in any color anaglyph, some scene colors should be avoided completely if at all possible. (Red spots on a dark background, for instance, can drive you crazy.)

Vivitar's Q-DOS lens incorporates refinements developed by NSA member David Burder on a basically simple concept first patented by J. Songer in 1973. The anaglyphic filters in the more sophisticated system adjust for horizontal or vertical composition and can be removed from the optical path at the flick of a switch for regular photography. The first Vivitar lenses to be equipped with the filters will be the 70-210mm zoom and the 105mm macro, to be test marketed in England this year.

In specific circumstances, and in the hands of someone aware of its limitations, a Q-DOS lens will produce pleasing depth effects with no extra effort involved. Someone who tries one for general 3-D photography, however, will often find their images missing most of a dimension.

Automated Hypers?

Hyperstereos from moving vehicles or planes, as seen in the article by Dieter Lorenz in this issue, may have been made easier by a new line of cameras from Hong Kong. About a year ago, a four-lens camera called the Action Tracker was introduced for capturing rapid-action sequences in four images exposed a fraction of a second apart from any motor drive could manage. Now an eight lens version looking like a Nimslo with bifocals is about to be marketed in England from the FED era and projector internationally. SOUND like someone has hopes that stereoscopic photography in the present.

Soviet FED Camera Now Official

A multi-language leaflet recently sent to the Third Dimension Society in England from the FED factory in the USSR may indicate the opening of an effort to market the auto exposure 35mm stereo camera and projector internationally. One side features a color photo of the camera and projector while on the back, descriptions of stereo photography and the FED equipment appear in five languages. An enclosed letter from A.A. Zhdanov, general director of the “Amalgamation FED” offered to “carry on talks with you about the delivery of...stereo cameras and slide projectors.” The estimated prices sound like someone has hopes that stereo can save the Soviet economy, with cameras at about $420 U.S. and projectors at about $580. (See Jan./Feb. '90, page 26.)

First 3-D IMAX Opens in U.S.

The 3-D IMAX film The Last Buffalo will be exhibited for the first time in the U.S. at the Six Flags Great America amusement park in Gurnee, IL. The 27 minute wildlife film will run several times a day from May through the 1991 season in the park’s “Pictorium” theater – the largest 3-D IMAX theater in the world, with a 64 X 88 foot screen. The park is about halfway between Chicago and Milwaukee on I-94.

The IMAX people combine precision stereography with impressive cinematic technique and sheer size to create an experience worth a special trip to see. Stereoscopic coverage of the making of the film (before the title was chosen) appeared in the May/June '89 Stereo World, page 12, while details of the 3-D IMAX process appeared in July/Aug. '86, page 23, with some updates in the IMAX "Solido" article, Sept./Oct. '90, page 24.

The NS–What?

The non-profit National Stereoscopic Association was founded in 1974 to promote the study and preservation of the stereoscopic images and equipment of the past and to encourage the growth of all aspects of stereoscopy in the present. Besides publishing the bimonthly Stereo World, The NSA hosts regional and national meetings featuring collector’s trade fairs and 3-D projection programs.

If this third color issue of Stereo World is the first you’ve heard of the NSA, we invite you to write for more information. Send a SSAE to NSA, PO Box 14801, Columbus, OH 43214.
One of the first things a novice stereo collector finds is that some views are distinctly different from others. They are in color, for starters, contrasted with the usual monochrome. On closer inspection, they are found not to be photos, but printed pictures like those found in magazines. Finally, antique dealers charge more for them because "they’re color photographs". The novice feels he has stumbled onto a real treasure, and buys a handful.

Fig. 1. “Rapids and Goat Island Bridge” published by D Appleton, photolithography by Austin A. Turner, 1858-1860. This Niagara view was printed using a method based on that of Alphonse Poitevin of France, the first "commercially viable" means of photomechanical reproduction. The patent for this modified process (using a glass positive rather than a negative to expose the prepared plate) was issued to J. Cutting and L. Bradford in 1858. As with similar processes, the use of a "grained" lithographic stone allowed reproduction of some middle tones in the image. Blue and sepia flat tints were printed over the black of the image for color.

6 X enlargement of detail from figure 1. Other early photomechanical stereos (made in Europe by Poitevin’s process) were imported as early as 1857-58 by the Langenheims of Philadelphia. The Poitevin process, and numerous variations on it, involved preparing a lithographic stone or glass or metal plate with potassium bichromate and gelatin, albumen or gum arabic. A negative was then exposed on the plate (or on a transfer sheet which was then applied to the plate). After etching with acid, the printing surface was ready for ink and paper. (See "The Silver Sunbeam" by J. Towler, 1864, Facsimile Edition Morgan & Morgan 1969, pages 286-309.)
Then, in Darrah's *World of Stereographs* he finds that they are "lithographic views", or "lithos", and he hears some other collectors brush them off with statements like: "of no historical value...badly made...worth only a few cents each". What's the novice to think? With all respect to Darrah, his interest in stereos increased with their age. He completely disregarded, for example, the later transparency-based techniques such as View-Master. I suspect he grudgingly gave lithos a place in his book because many were made in the 19th century, and there are a lot of them around. I'd like to give some contrary opinions as to their merit, and their role in the history of stereo.

![Karnak and the Nile: Egypt](image)

**Fig. 2.** An 1860s photomechanical reproduction of a Francis Frith view of Karnak. Viewing the original card through a stereoscope, the impression is of a somewhat grainy, high contrast photo – but without distracting half-tone dots. Exactly which of the early processes produced this view is hard to determine, but the "grain" of the ink is more coarse than that of the later "collotype" in figure 10.

6 X enlargement of detail from figure 2. By the mid 1870s, non-half-tone photomechanical reproduction methods were producing very high quality prints for use in books and for a few stereoviews. Most involved the use of a sensitized gelatin relief which produced plates, or from which prints were made directly. The resulting tiny random specks of ink seem to clump together more with every darker area in the original photo, matching the original tones more faithfully and in greater detail than half-tone screens and dots would be able to do for many years. Following the complex but elegant Woodburytypes were the more commercially practical collotypes under trade names like Albertypes and Arto-types (E. Bierstadt) and Heliographs (J. Carbutt). (See "John Carbutt on the Frontiers of Photography" by William Brey, Willowdale Press 1984, Chapters 8 & 9.)
Figure 3. "Cascade at Plagrove, Colorado" from a cheap 1910 Sears Roebuck series. The coarse letterpress half-tone dots have been overprinted with blotches of color in, at best, approximate registration with the actual images. For all too many collectors, cards like this come to mind with mention of the word "litho". Most half-toned views of the time used screens of from 100 to 133 lines per inch. (Stereo World reproductions in black & white issues are screened at 150 lines, and those in color issues are scanned at 175 lines.)

Fig. 5. "Wolfsmilchschwärmer (Deilephila euphorbiae L.)" by Hans Hildebrand of Germany, 1910. These "Chromoplast" cards were among the finest color lithos ever printed. Separate blue, red and yellow dot screens combine in excellent register to form the image and colors, much as with all the color photos in this magazine except for the lack of any black dots. (Only the borders of the Chromoplast cards used black ink.) The three color separation negatives may have been created in a studio camera by shooting the display three times through different filters, creating actual color photographs for reproduction via the printing press.

Three points are critical: First, they were cheap. Second, they were in living color. And finally, they often show scenes not found in any real-photo format.

Before discussing these, a few words about how this sort of image was made. Conventional photography, from Daguerre onward, produced a picture by chemical action, commonly involving silver compounds. "Litho" views are made by mechanical processes, rather than chemical; as a group, they are called "photomechanical".

There is no need here to go into the dozens of these processes developed from the mid-19th century onward. For our purposes they can be divided into two groups: First, half-tone lithography, and second, all others. However, it’s important to note that while practical half-tone lithography is a fairly recent (1885–1890) arrival, the “others” have been around nearly as long as photography itself. D. Appleton was issuing colored photolithographs in the late 1850s (figure 1) and pirated copies of Francis Frith’s views of the Middle East were reproduced photomechanically in the 1860s (figure 2).

Let me give a simplified explanation of half-tone lithography, since it was used to print practically all the lithographs you’ll see. An image

Fig. 4. “The Church of the Holy Sepulchre, Jerusalem.” From an early 100-card series of half-tone color views, this well printed 1890s example shows what was possible when quality rather than quantity was the goal. A high gloss varnish protects the images and helps emphasize color and detail. The photos were probably taken especially for this series, as they aren’t known to exist as photographic print views.

6 X enlargement of detail from figure 4 shows the careful use of solid color tints printed in relatively tight register over the black & white half-tone images.

Fig. 8. Cavanders Ltd. Coloured Stereoscopic series, No. 3, “SKI-ING DOWN A STEEP SLOPE.” Issued with Army Club Cigarettes in the early 1930s, these small lithographs have a colotype style grain pattern rather than half-tone dots. The blue in the sky is a solid tint, but in the figure’s face and in the snow and mountain there are tiny grains of blue and red in a grain similar to the black & white image.
is photographed through a screen which has fine crisscross lines cut into it. These break up the continuous tones of the original photo into a series of dots, the sizes of which are a function of the darkness of the original image. These dots are transferred to a printing plate, and in the press, each dot picks up a bit of ink, which is printed on the paper. The end product is a reproduction of the original broken up into tiny dots, simulating the tonal gradations of the original photo. (The half-tone effect works the same, whether the image is printed on a letterpress using a photoengraving (relief) technique or by true lithography using smooth stone or metal plates to transfer ink to paper.)

A single press run will give one color; by using different inks in multiple runs (or later, presses with multiple plates) one can produce an approximation of the original colors. While this sounds complicated, the cost-saving factor is that once the printing plates are made, tens of thousands of images can be printed at high speed. The

Fig. 6. Hollinger No. 4, "The first Bulgarian soldier killed at Mustafa Pasha." From a rare 1913 series on the Balkan War, this (unfortunately flat) black & white half-tone view is overprinted with blocks of solid color. The pink for the faces is achieved by smaller blobs (but not half-tone dots) of red ink. No photographic versions of this set are known.

Fig. 7. "FIESTA SHRINERS, ARAB PATROL, LOS ANGELES, CAL." by Rieder of Los Angeles, 1905. Here a good quality black & white half-tone is overprinted with pink, yellow and blue tints to produce some unusual colors. The combined tints in the pavement and building facade are made of small, random specks of ink, but are not half-tone dots.
slow and expensive darkroom technique of printing one photo at a time (not to mention hand tinting for color) is avoided. As a result, lithoviews could be sold for a fraction of a cent; photo stereos were from 10 to 100 times more expensive.

This cheapness was the most significant characteristic of lithoviews. Few people realize that photographic stereos were always a hobby of the affluent, from the earliest days through Keystone. When Nottage, of the London Stereoscopic Company, talked about “a stereoscope in every home”, he wasn’t referring to the working classes. A laborer making $2 to $5 per day had barely enough for necessities, let alone luxuries; a handful of stereoviews would cost him the better part of a day’s wages.

But with the advent of practical half-tone lithography by the 1890s, a vast new market opened up. Now, almost literally “every home” could afford stereoviews, and cheap stereoscopes were mass-produced to accompany them. In 1908, Sears Roebuck offered a viewer for 28 cents, and 200 colored lithoviews for 85 cents (Figure 3). This works out, in today’s

Fig. 9. Australian “Weet-Bix” cereal card No. 30, “FERRARI 250 GT FERRARA COUPE”. This more or less “modern” color lithograph from 1964 suffers from its small size which requires that all details be composed of relatively fewer dots, which are emphasized by enlargement in the viewer.

Fig. 11. A view printed in a newspaper for readers to cut out and paste on a card in the 1930s. This example appeared in a supplement printed by the gravure process, used for higher quality illustrations in “magazine” sections. Other views appeared on the regular daily pages of some papers, printed in coarse letterpress half-tones along with the other news photos. One paper in New Zealand printed a series of black & white half-tones 3-up on sheets of medium stock with perforations between the views so readers could separate the scenic images for viewing.

6X enlargement of detail from figure 11. The gravure (intaglio) process depends not on variations in the size of dots to reproduce the tones of a photo, but on different depths of tiny “wells” produced in the plate by the screen. Deeper wells in the darker parts of an image hold more ink, which is deposited directly on the paper in darker globs relative to the depths of the wells. Very rarely used for stereographs, the process commonly employed this sepia ink color.
money, to about $3 for the viewer and 5 cents each for the views!

This development was extremely important to stereo as a whole. The popularity of photo stereos had declined sharply by the 1890s; most of the small operators had gone out of business. But the arrival of this new mass market helped to maintain broad stereo interest for another 30 years. I suspect that Underwood, White, and Keystone would have died years earlier, had it not been for lithos.

It's significant that in the European countries, where they never caught on, stereo was largely dead by the turn of the century.

So much for cheap: How about the charge that lithoviews were badly made? Of course many of them were; nobody would claim that a newspaper reproduction of a photo is as good as the original. However, the best were very good indeed, the state-of-the-art for the

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**Fig. 10.** "AT THE BOTTOM OF A COAL PIT" is from a series of 28 British coal mining views distributed as advertising for Caswell & Bowden, Ltd., Coal Brokers. The full size views, from about 1900, are good examples of high quality collotype (not to be confused with Calotype) printing of stereoviews. The slight grain pattern is probably an acceptable trade-off for a printed ink image that may outlast silver photographic prints by centuries.

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**Figure 14.** Herman Knutzen No. 702 f, "I gif you fireworkes, vat? You vill half fun mit me, yes?" An extremely well printed comic view from 1906 using 3 separate dot screens for colors held in better than average register. The uneven slop-over of colors at the top arch shows why some publishers used dark borders. In this case, the border is printed with a shaded tan screen to give a 3-D picture frame effect before the card is in the stereoscope.
time. (See figure 4.) Quality is a function of price, and most litho-views were deliberately made as a cheap alternative to photo views. And you must remember that many photo stereos were badly made too, with poor contrast and fading.

The final point is that many litho-view images never were issued as real photos. I'd estimate that this runs to as much as 25%, so if you're interested in all historical images, you'd better not overlook lithos. Figures 5, 6 and 7 are examples of this.

Most people figure that because there are so many lithos around, there must be a wide diversity. There were literally millions printed, of course, but after collecting lithos for a quarter-century, I'd guess that there are no more than 4,000 different images. The emphasis was on quantity and cheapness, not diversity or quality.

They were so cheap that they were used as free advertising premiums. Quaker Oats had a major issue of these, putting one into each box of cereal. Other companies did likewise (see figures 8, 9 and 10). Newspapers would print stereos for readers to cut out and paste on cards (figure 11).

One very specialized set, Dr. S.I. Rainforth's 128 cards on skin diseases (figure 12), included some of the finest full color lithographic...
stereos to be produced in the United States. It was the professional source-book for dermal disasters for twenty years, and the forerunner of today's medical stereography.

However, the vast majority of lithos were designed to educate (figure 13), amuse (figure 14) or titillate (figure 15). The merchandising companies knew the temper of their customers, catered to it, and the results sold like hotcakes.

Who were the merchandisers? Some of the major photo companies, such as Keystone and Underwood, never issued lithos, as far as I can tell, although H.C. White did. Most of the production was by specialized printing companies for big retailers such as Sears Roebuck and Montgomery Ward. Probably more than three-quarters of the lithos sold came from those two companies alone. Sears had over 2,500 views on issue at the height of litho popularity. As a result, most of what's now seen is this limited assortment.

The remainder were produced by a host of small companies, often only a single set, or a few dozen cards. But it's this residue in which the rare, unusual and important images will be found, since they were almost never issued as photographic stereos. Because of the thrill of the chase, and their historical value, they are well worth looking for. Take my advice and keep after them, in a selective way!

Griffith & Griffith, one company which did publish lithoviews drawn from its extensive line of photo-stereos, discontinued operations about 1915. It re-surfaced in a very strange way in the early 1970s with the appearance on the antique photo market of uncut sheets of their lithoviews. All of the 3x4 foot sheets I have seen are identical, and have 48 images. Printed on ordinary paper, it's conceivable that they are proof sheets from 60 years ago, but this seems unlikely in view of the large quantity and the mixed nature of the images. It seems more likely that these are reproductions than that the original printing plates would have survived this long to produce new sheets. The source and date of printing of these sheets remain a mystery, and if any readers have more information it would be appreciated.

For those interested in lithos in more depth, I'm preparing an NSA Monograph on the subject, giving many more technical details, and listing all those views known to me. Members having collections are invited to contact me, so information can be made as complete as possible.

Major U.S. Litho Publishers

Many of the lithoviews printed bear only a series title, such as "World Wide Views" but no indi-
ocation either as to the source of the negatives or who did the printing. Some of the major ones which can be identified include:

- Barnes & Crosby Co., Chicago; large output, used many H.C. White images.
- Kawin Co., Chicago; large output, used many H.C. White images.
- American Colortype Co., New York & Chicago; one of the latest producers, up into the late 1920s; often identified only as "A.C."; seem to have used original negatives; also printed paper dolls, postcards, etc.
- World-Wide View Co., Chicago; large output, used mainly Griffith & Griffith images.
- Atlas View Co., Chicago; large output, image source unknown.
- Continental Art Co., New York & Chicago; large output, image source unknown.
- American Stereoscopic Co., New York; limited output, used own images.
- T.W. Ingersoll Co., St. Paul, MN; large output, used own images.
- Griffith & Griffith, New York; seem to have produced lithos on their own as well as selling negatives to other companies.
- Montgomery Ward, Chicago; huge output, actual producer of lithoviews unknown.

Fig. 15. "Here's to Your Health, Old Man." was Sears Roebuck's idea of a risque view in 1910. The view is printed from 3 separate screen colors in only fair register.

- Sears Roebuck, Chicago; huge output, producer of lithoviews unknown.
- H.C. White Co., Bennington, VT; produced lithoviews under their own label with a New York City address, and sold negatives to other companies.
- J. Hollinger, New York; limited output, but fine lithography.
- Aste & Co., New York; moderate output, fine quality, used own negatives.
- M. Rieder, Los Angeles; interesting images but limited output; source unknown.
- Pan-Chro Scope Co., Indianapolis; WW-I set in small format.

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A Special Look at Prototype and Sample Viewers

Focusing Viewer

This hand made prototype for the Model D focusing viewer (figure 1) was part of an effort to provide the user with the ability to adjust the length of the eyepieces for greater ease in viewing and to eliminate the need to wear glasses while using the View-Master viewer. The body is constructed from the reel changing components of a black model C viewer. The focusing mechanism is made of hand milled aluminum, and the eyepiece holder and support plate were hand fitted and are made of solid brass.

Exact specifications of this model are unknown. However, Sawyers changed the focal length in the final production model because of the inability of the prototype model to focus for certain eye disorders. (Photos by Wolfgang Sell)

Talking View-Master

In the early 1970s View-Master decided to provide greater realism by adding the element of sound to their “real as life” pictures. The Engineering Department constructed the first viewer of clear plastic so that all working parts were visible (figure 2). In this way, the actual working mechanisms could be observed and any defects found and corrected.

The talking record prepared at the same time as this viewer is a recording of a man’s voice reciting a numerical sequence. This was done to determine if the scene changing mechanism was in sync with the appropriate recorded message. The final version of this viewer was released in a two-tone beige color combination. (Clear plastic examples of two versions of the model A viewer are pictured in SW Sept./Oct. ’89.)

Michael Jackson’s Viewer

Michael Jackson has always been fascinated by the magic of 3-D. The three-reel packet of the video hit Thriller was a great success for GAF and because it was so successful, another View-Master gift set featuring Jackson was also planned for release to celebrate the 1984 “Victory Tour.”

In conjunction with the tour, View-Master decided to present
Michael Jackson with his own special set of viewers. This set consisted of two viewers - a current blue model and the newly released electronic talking model - each with a special platinum finish. (This finish was used because the Thriller LP went platinum in 1980.)

When the Victory Tour made its stop at RFK Stadium, View-Master made their presentation to Michael. Unfortunately the set was stolen the same night, while Jackson was performing on stage. View-Master recreated the set for him and superimposed his autograph on the viewer to make it even more personal. The example seen here (figure 3) was used to make the color test for the final product.

White Viewer

The exact purpose of this solid white (figure 4) plastic viewer (it’s not dipped or painted) is unknown. The GAF and View-master logos on the front are in black, and the ball knob on the changer lever is black plastic. A similar color had been used much earlier, as the pale cream version of a model viewer (figure 5) proves. This rare example is from the View-Master plant collection.

Mickey Viewer

The unpainted face on this viewer (figure 6) was the model for the final version of the Mickey Look Viewer. This Mickey is constructed of pink plastic and is a completely different color than the flesh tone base of the final made-in-China version of the face. Copyright data on the back of the left ear of the standard Mickey viewer is missing from this early example. The full color version of this model is available at retail stores across the country.

Send your questions and ideas for future columns to Wolfgang & Mary Ann Sell, 3752 Broadview Dr., Cincinnati, OH 45208.

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STEREO PHOTOGRAPHY by state or subject: Aviation, Automotive, Blacks, Canada, Cities, Expositions, Entertainments, Indians, Military Occupations, Organizations, Postal, Sports, Transportation, Towns, Western and World by country. Macdonald's Historic Collection, PO Box 56137, Portland OR 97238-6371.

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As part of their membership, NSA members are offered free use of classified advertising. Members may use 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words and additional ads may be inserted at the rate of 20¢ per word. Please include payments with ads. We cannot provide billings. Deadline is the first day of the month preceding publication date. Send ads to the National Stereoscopic Association, P.O. Box 14801, Columbus, OH 43214, or call (419) 927-2930. A rate sheet for display ads is available upon request. (Please send SASE.)
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C.S. Fly photographs of the Geronimo Expedition, stereo views of any of the above subject areas including Indians, signed/inscribed books by Western personalities, lawmen and former outlaws, Texas saloon tokens and advertising. Dr. Johnny Spellman, 10806 North Imaiminamicho, Nakahara-Ku, 467 Imaiminamicho, Nakahara-Ku, 733-6027.

DOLLS, stereos, dag, tins, especially Tallahassee, Tampa and views or old photographs containing croquet matter to: Allen Scheuch, 356 W. 20th St., New York, NY 10011 (212) 929-2299.

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JOHN H. FOUCHE: Yellowstone series #38 "View Down the Ravine, on the Custer Field". Wanted for historical research. Would only need to copy or rephotograph, but would most likely to purchase or trade (have Fouche #20, "U.S. Wagon Train" to offer). James Brutl, 1907 Rapallo Place, San Pedro, CA 90732; (213) 832-7943 days, (213) 833-7477 eves.

MINOLTA E ADAPTER for adapting Saxa lenses to Minolta non-autofocus SLRs. Dan McColl, RR 1 Box 780, Grove, OK 74344, (918) 786-2547.

MUYBRIDGE VIEWS. Top prices paid. Also Michigan and Mining - the 3 Ms. Many views available for trade. Leonard Walle, 60 Pinto Lane, Novato, CA 94947, (415) 525-1188 (work).

NUDE VIEWS. Seek explicit pre-1900 nude stereo views. G. Hayes, Box 55721, Sherman Oaks, CA 91403.

RADEX/NEWMAN BROWN viewers and carriers for double 35. Robert D. Heinold, 331 Wattaquadock Rd., Bolton, MA 01740-1236.

SHAKER PHOTOS. All formats. Please send Xerox copy with price to: Richard Brooker, 36 Fair Street, B-12, Cold Spring, NY 10516.


STEREO DAGUERREOTYPES: All kinds, all nations and subjects, any condition. Ken Appollo, Box 241, Rhinecliff, NY 12574, (914) 876-5232.

STEREO VIEWS of Porsche automobiles, all models. Am attempting to compile a history of the evolution of the Porsche sports-car...from the late 1940s to present date. Of particular interest are any assembly/ manufacturing views. Frank Kratzer, 1930 Villa Way South, Reno, NV 89509, Phone (702) 825-1968, FAX 825-5820.

STEREO WORLD back issues. Need Volumes 1 to Volume 4, No. 2 and several later issues. Indicate condition and price. Tom Prall, Rt. 3, Box 146, Apt. 6, Buckhannon, WV 26201.

SUGAR: I wish to purchase stereo views of anything related to sugar, sugarcane, sugar beet and their harvest, processing and marketing. Wayne A. Boynton, PO Box 1428, Loxahatchee, FL 33470-1428.

TAX STAMPS wanted on any image - stereo views, CDVs, cabinet cards, tins, ambros, etc. Michael Scharman, 34 Florigate Rd., Farmingdale, NY 11735.


WINDOM, MASONRY views. Looking for Anderson, Bishop Brothers, William Chase and McGarry among others. Send photographs and price. Tom Prall, Rt. 3, Box 146, Apt. 6, Buckhannon, WV 26201.
Calendar

June 23  (IL) Chicagoland's Camera & Photo Show, Holiday Inn, Rolling Meadows, IL. Contact Box 72695, Roselle, IL 60172. Call 708-894-2406.

June 23  (VA) Barone Camera Swap Meet, Holiday Inn (Crystal City) 1489 Jeff Davis Hwy, Arlington, VA. Contact Camera Swap Meet, c/o Barone & Co., Box 18043, Oxon Hill, MD 20745. Call 703-768-2231.

June 29  (OH) Ohio Camera Swap, K.I.C. Bingo Hall, 7725 Vine St., Cincinnati, OH. Contact Bill Bond, 8910 Ohio Camera Swap, K.I.C. Bingo Hall, 7725 Vine St., Blue Ash, OH 45242. Call 513-891-5266.


July 7  (CA) Pasadena Antique, Collectible & Usable Camera Show & Sale, Pasadena Elks Lodge, Pasadena, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405. Call 213-392-6777.


July 20  (CA) Culver City Camera Show & Sale, Vetrans Memorial Auditorium, Culver City, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405. Call 213-392-6777.

July 21  (CA) Buena Park Camera Swap Meet, Sequoia Club, 7530 Orangethorpe Ave., Buena Park, CA. Call 714-786-8183 or 786-6644.

July 21  (IL) Chicagoland's Camera & Photo Show (see June 23).

August 4  (CA) Pasadena Antique, Collectible & Usable Camera Show & Sale (see July 7).

August 11  (CA) Buena Park Camera Swap Meet (see July 21).

August 11  (NJ) Second Sunday Camera Show (see July 14).


August 18  (IL) Chicagoland's Camera & Photo Show (see June 23).

August 18  (PA) Delaware Valley Photographic & Collectors Association Summer Show, George Washington Motor Lodge, King of Prussia, PA. Contact DVP/CA, Box 74, Delanco, NJ 08075.

September 2-8  (TX) Photographic Society of America annual Convention, San Antonio, TX. A full stereo program will be included. Contact Richard Frieders, FPSEA, Conventions V.P., 1305 Foxglove Dr., Batavia, IL 60510.

September 8  (AZ) Phoenix Camera Shows, Best Western Sir Francis, Phoenix, AZ. Contact Dale at 602-266-3301.

September 8  (CA) Pasadena Antique, Collectible & Usable Camera Show & Sale (see July 7).

September 8  (NJ) Second Sunday Camera Show (see July 14).

September 14  (CA) Culver City Camera Show & Sale (see July 20).

September 14-15  (MI) 24th Detroit Photorama USA, Dearborn Civic Center, Dearborn, MI. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2243.

September 15  (CA) Buena Park Camera Swap Meet (see July 210.

September 22  (MA) Boston Antique Photo Show, 57 Park Plaza Hotel Howard Johnson, 200 St. Park Sq., Boston, MA. Images only. Contact Russell Norton, Box 1070, New Haven, CT 06504. Call 203-562-7800.

September 22  (IL) Chicagoland's Camera & Photo Show (see June 23).
September 22 (VA)
Barone Camera Swap Meet (see June 23).

September 23-30 (France)
The 8th World Congress of the International Stereoscopic Union will be held in Paris in the Palais de Tokyo Museum as the main event of the “International Festival of 3-D Images”. (See Nov./Dec. ’90, page 40.) For Congress information or to join the ISU, contact Paul Milligan (USA Rep.) 508 La Cima Circle, Gallup, NM 87301. Call 505-722-5831.

September 28 (OR)
Portland Oregon 3rd Annual Fall Camera Swap meet, Montgomery Park, 2701 NW Vaughn St., Portland, OR. Contact Dwight Bash, 2324 SE 11th Ave., Portland, OR 97214. Call 503-239-5617.

October 6 (VA)
D.C. Antique Photo Show, Rosslyn Westpark Hotel, 1900 N. Ft. Meyer Dr., Arlington, VA. Images only. Contact Russell Norton, Box 1070, New Haven, CT 06504. Call 203-562-7800.

October 19-20 (MA)
Photographica ‘91 – The Boston Show, Armenian Cultural Center, 47 Nicholas Ave., Watertown (Boston) MA. Contact PHSNE c/o David Berenson, 32 Colwell Ave., Brighton, MA 02135. Call 617-254-1565.

The Next 3 NSA Conventions

Thanks to some dedicated advance work by NSA regional members and Vice President for Activities John Waldsmith, facilities contracts have been signed for national conventions through 1994. Those who need to plan well in advance can now pick one or more of these combinations of dates and places to enter on their calendar or computer.

1992: Fort Wayne, IN Aug. 7-9
1993: San Diego, CA Aug. 13-15
1994: Milwaukee, WI June 17-19
More details will be available soon, as well as the likely places and dates of conventions for 1995 and ’96.

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4x6" per 100: $8 case of 1000: $70
STEREO (3 1/4" x 7") per 100: $9 case of 1000: $80
STEREO POLYESTER
CABINET (4 3/4" x 7") per 100: $10 case of 1000: $90
5"x7" per 50: $7 case of 2000: $25
BOUDOIR (5 1/2" x 8 1/4") per 25: $6 case of 500: $80
8" x 10" per 25: $8 case of 2000: $40
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48 STEREO WORLD March/April 1991
Brandt was the general secretary, and I became treasurer. We then embarked on an era of expansion and growth that continues to this day.

Louis Smaus was always available when problems arose. You could depend on it. His advice and actions were always supportive. Much of what the Stereoscopic Society is today is due to Lou Smaus. The realization that he will not be there anymore leaves a great void. Lou was noted for his sensitive and artistic scenic stereo views, especially of Yosemite. He worked tirelessly as photo consultant and historian for the Yosemite Museum and also with the Trolley restorations in San Jose, CA. Both of these activities were skillfully recorded in stereo, and the results circulated in the Society folios. It is hard to realize we will see them no more. We have lost a good friend and colleague.

Wayne E. Davis

Another sad note to report is the death of Society member Wayne Davis of Spring Valley, CA. He suffered a sudden collapse while doing some yard work. He was 64 years old and was apparently well prior to the fatal seizure. Wayne had made a Christmas tradition of sending stereo views of himself posed in the manner of well known photographers and stereographers of the past, duplicating as he could, their posing in self portraits. (His 1988 issue in the manner of F. Jay Haynes is illustrated.) Wayne was a long time member of the print circuit and will be missed by his fellow printmakers. Persons interested in possible Society membership should write to Jack E. Cavender, 1677 Dorsey Ave., Suite C, East Point, GA 30344.

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This 3-D medieval fantasy by stereo artist Carolyn Bartlett Gast illustrates the letter G as part of a long term effort to present the entire alphabet in stereo pairs made of gemstones, ink drawing and gold leaf. Other examples present less of a fusion challenge but equal imagination in "Illuminations of a 3-D Alphabet" on page 14.