In the summer of 1984, Mr. Vernon Lambright toured the western United States scenic areas. Having always enjoyed the 3-D realism of View-Master reels, he bought as many as he could find as souvenirs of his trip.

Once home, many of his friends asked where they, too, could find similar reels and share in the wonderful world of View-Master magic. Encouraged by this, he ordered 1,000 reel sets in the fall of 1984 for some of his friends and neighbors. After they were distributed, several hundred sets were left over so he decided to offer them for sale in his Amish/Mennonite newspaper. To his surprise, the response was phenomenal, and he had to order an additional 5,000 packets!

Some requests received were for packets that View-Master no longer produced. In order to accommodate his requests he decided to have the desired reels reproduced; however, this created a new problem. Many of the reel sets he wanted to have manufactured showed a beach scene or a statue without clothes. In order to fill the needs of his clientele he had to make a decision - drop the whole project or try to get some of the pictures changed. Luckily he was able to have the scenes changed and his business has been thriving ever since. Because of his success, he now has a mail order business offering these special View-Master packets.

Christian & Scenic Publications had picture changes made on thirteen different packets. They are:

- Australia
- Italy
- Austria
- Mexico
- England
- Sweden
- Easter Story
- Birth of Jesus
- China
- Holland
- Heidi
- Russia
- Butchart Gardens
- Iceland
- Henry Ford Museum
- Ozark Mountains
- The Holy Land
- Scenic USA

A complete list of packets available can be obtained by writing to: Christian & Scenic Publications, Rt. 8, Bloomfield, IA 52537.
Table of Contents

Volume 17, Number 6  January/February 1991

In This Issue

Niagara Falls, Part 3 ............................................. 4
by Mark A. DiLaura

Stereo Pairs on a Computer .................................... 19
by John E. Schwenker

3-D Vista Screen Makes Everyone Look ..................... 22
by John Bradley

Easter Island: The Navel of the World ....................... 30
by Jean G. Poulot, with stereo by Suzanne Williams

Two New NSA Directors ......................................... 33

Cromwell Dixon: The First to Fly Across the Continental Divide ... 34
by Del Phillips

Regular Features

Editor’s View Comments and Observations, by John Dennis .......... 2

Letters Reader’s Comments and Questions ....................... 3

NewViews Current Information on Stereo Today, by David Starkman & John Dennis ... 26

The Society News from the Stereoscopic Society of America, by Norman B. Patterson . 29

Classified Buy, Sell, or Trade It Here .......................... 38

Calendar A Listing of Coming Events .......................... 40

Front Cover: “American Fall and Rainbow through Ice Arch.” by George Curtis is one of the impressive winter scenes in part 3 of “Niagara Falls” by Mark A. DiLaura. The final installment of this series begins on page 4.


**Editor's View**

Holmes #1

The 132 year old original prototype of the Oliver Wendell Holmes stereoscope is on public display for the first time in more than half a century. NSA members, working with the New Hampshire Historical Society, the Photographic Historical Society of New England, and the Phillips Academy's Holmes Library helped arrange the restoration and stabilization needed to make it safe to move and exhibit the famous viewer. (Phillips Academy of Andover, MA is the alma mater of Dr. Holmes and their Holmes Library is not to be confused with the much younger NSA Oliver Wendell Holmes Stereographic Research Library.)

Along with over 200 views and other stereo hardware, the Holmes prototype is on display in a special segment of the New Hampshire Historical Society's current year-long exhibit on 150 years of photography in that state. (See July/Aug. '90, page 40.) Unfortunately, the special "Focus on the Kilburns" segment with the Holmes viewer included runs only until May 17 '91, but the restoration work done on the viewer makes it at least possible that it can be displayed again soon in other locations. (Thanks to Laurance Wolfe for the above information.) A feature article on Holmes and his viewer will appear in a future issue.

A Time of Renewal

If that NSA Renewal envelope was last seen peeking from beneath a pile of letters, catalogs, views and tire sale ads on your desk, dig it out now! There are things in the World that are not to be missed, and some of the best of them even I don't know about yet - our members continue to surprise me with gems of research and fine images in every aspect of stereo. Some of the known coming attractions include another color issue, the stereo record of Jumbo the elephant, a close look at the limited but stereotypical stereo coverage of Samoa, a serious view of litho views, and some 3-D collage pairs constructed from actual gemstones and gold leaf!

News of current stereo photography developments continues to come in every week, and the new editorial and layout computer system will help us to report it in a more timely way than ever before. An old reminder is worth repeating here: if you have a piece of news or an idea for a feature, LET US KNOW! Don't assume that we know about every obscure gimmick or high-tech breakthrough - or that we have blockbuster feature articles stockpiled in a vault for the next 20 years worth of issues. In every sense, we rely on members to keep the World renewed.

**Edwin Land: 1910 - 1991**

News of Dr. Edwin Land's death in March was largely eclipsed by coverage of events in the middle east. Brief obituaries concentrated on his work in instant photography, leaving his very basic contributions to the technology of light polarization for the last when they were mentioned at all. It was Land's development of economical sheet polarizers in the early 1930s that made quality stereoscopic projection practical. Long before going into the camera business, his Polaroid Corporation had transformed 3-D viewing from a solitary peek through a stereoscope to an experience which could be shared by large audiences around the world. Perhaps more than any other individual, Edwin Land made possible the rebirth of wide popular interest in all types of 3-D imaging in the mid 20th century. While his famous cameras gave us pictures in seconds, his polarizers gave us the world in depth.
In Praise of Anthony

It is cheering to find that original research, often difficult in terms of the amount of effort necessary to find bits of information, is being conducted in our field of stereo photography. The article by Mark A. DiLaura, centered on Charles Bierstadt, is most welcome for the many facts it has brought to light.

Evaluating antique stereographs can be a lifetime project. It is only after we have looked at many thousands of them that we consciously or unconsciously perceive trends in composition, subject matter, and the benefits of advancing photographic technology. This can lead to a different evaluation of the work of the earlier photographers. The late William C. Darrah had high praise for the Niagara Falls views of publishers like Anthony, Soule, etc., quite different from the adverse comments offered by Mr. DiLaura. Certainly the best early glass views of Niagara, some of them instantaneous, are exquisite in the eyes of at least some collectors.

Personally, as an admirer of Edward Anthony, I was a bit put off by Mr. DiLaura’s comments on his operations. Anthony was not a saint, but his enterprise and his chosen options of when, and when not, to give named credit to the maker of a negative were never questioned in his day, so far as I know. It would take too much space to go into these matters, but I believe that Anthony had and deserved much respect.

Frederick S. Lightfoot
Greenport, NY

Canadian Region

The NSA readership may be interested to know that there is a vibrant Canadian region of NSA. The first of our semi-annual meetings was attended by 18 members. There was a broad discussion of modern 3-D as well as interest in building a catalog of Canadian stereo views. It was decided to start with the Canada View Company and Underwood & Underwood. Contact Martin Bass for information on future meetings.

Martin Bass
London, Ontario

Back to the Moon

Stereo World is the best publication I’ve found for information on my favorite interest. Especially the issue on space and the moon landings (July/Aug. ’90). Several years ago I received a strip of 3-D transparencies that were taken on the moon’s surface. I had to mount them – but did so in Realist format mounts. (My cousin Hal Lockwood of Houston was under contract with NASA – he did the animation seen on TV.) That issue of Stereo World told me what means of 3-D photography were used and what the views depicted.

Walt McCabe
Northport, MI

Quick Computer Cartoons

The information in “Random Dot Stereograms” (Mar./Apr. ’90) allowed me to create the enclosed “cartoon” on my computer. I used a program called Newsroom and using 60% of the screen in the “banner” mode created the stereogram with “clip-art”. The right side was done as a “natural” picture. The same items were displaced to the right on the left side. The greater the displacement, the closer to the viewer the items appear. Computer hobbyists will find stereograms a natural avenue for experiment.

Sol Steinberg
Myrtle Beach, SC

Proof that sophisticated hardware or complex programs aren’t required to have fun with 3-D computer drawing – “Lightning & Bird Chasing A Lady” by Sol Steinberg.
Niagara Falls

Part 3 of 3

by Mark A. DiLaura

Niagara Through the Stereoscope

This study examines the history of stereo photography at Niagara Falls during the latter half of the 19th century. Of particular interest and concern to this research was the exploration of the professional work and careers of Charles Bierstadt, George Barker and George E. Curtis, who were the three most prominent stereographic photographers of Niagara Falls during that time. Very little is recognized today of the very important contributions made by outstanding Niagara Falls photographers during this critical period in the history of photography. This study has been undertaken to redress this historical oversight. [This final installment covers the work of George Curtis. Part one covered Charles Bierstadt and part two covered George Barker.]

George Curtis

George Curtis was characterized as a “genial, convivial man” who was active in town organizations and had a host of friends. An indication that he was idealistic and enthusiastic can be gained from the fact that he “answered the call” (to arms) immediately when the war broke out between the States. After serving in the U.S. Navy during the Civil War, he returned to Buffalo, his native city.

Born in 1830, Curtis grew up during the period when photography had its inception and came of age. Having developed a youthful interest in this new technical marvel, he determined to make photography his life’s work. Living so close to Niagara Falls, he may well have been familiar with the photographic work that was being carried out there before the war. In any event, shortly after his return from the service, he moved to Niagara Falls, set up shop as a portrait photographer, and became truly the “local boy who made good”.

Portrait photography had become the “hot item” of the day, since prior to mid-19th century, only the wealthy could afford to engage the best artists to portray their likenesses on canvas. Itinerant painters who roamed back woods and small towns of the country often produced primitive likenesses that are considered charming and unique today, but often bore scant similarity to the sitters whom they were meant to portray. With the advent of photography, it became easy and inexpensive for the great middle class to adorn their walls with their own images. Therefore, in common with many other photographers who had flocked to Niagara Falls, Curtis obtained a location that was convenient to the tourist trade, and by 1868 he widely advertised his availability as a portrait photographer.

From his studio on Cherry Street, which was near the rapids above the American Falls, Curtis no doubt observed the activities of other photographers who were busily producing stereoviews of the landscape surrounding the Falls for the tourist trade. Since he has been described as an outgoing and engaging person, one can imagine the ease with which he struck up an acquaintance with a fellow veteran who had already established a reputation as a landscape photographer. John James Reilly was to become a celebrated photographer of the great American West, but at this point in time he had established himself in Niagara Falls.
There is evidence (compare figures 1 and 2) that Curtis and Reilly worked together. Here is a fore-shadowing of the artistry in capturing winter scenes at Niagara Falls that was to become a hallmark of Curtis' reputation as a landscape photographer. The heavy icicle that points to the crest of the Horseshoe Falls is balanced in crisp detail by the delicacy of numerous icicles suspended from the overhanging rock ledge. The superior details in Curtis' view, although identical with that of J.J. Reilly, indicates his early absorption with the chemical process of developing high definition negatives.

After the departure in 1870 of J.J. Reilly for the far west, Curtis did simultaneous and/or collaborative work with John P. Soule, the famous Boston stereographer who visited Niagara Falls on several occasions. Figures 3 and 4 represent collaborative work by Curtis and Soule. These views were made from two different sets of negatives, taken from the same vantage point at the same time. Although these two stereographs appear to be printed from the same negatives, that cannot be true because of the differing numbers that appear on the prints. Number 94 is scratched into Curtis' left, and 894 appears in Soule's right negative. The major differences in these prints are in the choice of framing, shadow detail and toner. Curtis framed his composition with the

Fig. 1. Curtis No. 20, "Below Table Rock – Winter.”

Fig. 2. J.J. Reilly No. 229, "Table Rock, Winter, Niagara." Was this view made from a second set of negatives identical to the better printed figure 1? Note that Reilly scratched a number in the lower right of his right negative.
ice cliff higher in the picture, giving the Terrapin Tower a more monumental appearance. The sepia toning of Soule's picture produces a softer image, with less distinct detail, whereas Curtis' views have greater acuity in shadow detail and clearer overall focus, an indication of finer work.

It was recognized that Curtis produced the best quality negatives of any of the Niagara Falls professional photographers. He had his own formula for collodion; Curtis' Niagara Falls Collodion for landscape photography. Because of its greater silver content, this collodion became known for its speed and its ability to produce prints of "detail and softness" and would become one of the most popular prepared collodions of the 1870s. His studies of ice crystal formations attest to his mastery of all steps of photography, from making his own collodion to producing the final prints.

"Hermit's Cascade - Winter" (figure 5) is a superb example of Curtis' ability to capture the crystal delicacy of ice formations. This view fairly sparkles when seen through a stereoscope. Translucent icicles hang like multiple gossamer curtains receding into the depths of a cavern, creating a surreal effect.

Another particularly effective winter scene is titled "American Fall and Rainbow through the Ice Arch" (figure 6). The form of a tree bent under its heavy burden of ice

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Fig. 3. Curtis No. 94, "Terrapin Tower from below - Winter." Note the number on the rock in the lower right of the left image.

Fig. 4. Soule No. 894, "Remains of Ice Bridge below Goat Island." Note the number in the lower left of the right image.
and snow creates an arch in the foreground, framing the distant cataract, with a rainbow clearly visible against the very light background of mist and tumbling spray. Other photographers had captured the image of the ever-present rainbow backed by dark water, but this example of light against the white demonstrates the sensitivity of Curtis’ prepared collodion.

Curtis reveals his insight into the capabilities of photographic representation in “Horseshoe Fall and Profile Rock – Winter” (Figure 7). In this stereograph, the heavily snow-laden branches in the foreground are softly out of focus and the eye is drawn into the three-dimensional depth, where Terrapin Tower and the ice-draped point are pictured in sharp relief in the middle ground of the picture. The brink of the Falls sweeps across the width of the view and is anchored in the frame, suggesting an extension of the vista. These techniques were unusual for that time.

Much has been said about the use of stereographs by landscape artists of that era in the creation of many dramatic and celebrated works. Careful comparison of Herman Herzog’s “View of Niagara Falls in Moonlight” (figure 8) with “Moonlight from New Suspension Bridge” (figure 9) by George Curtis leaves unanswered the question of which work was a copy. By 1872, when Herzog painted this moonlit view, Curtis was well known for
his talent in depicting night scenes with a dream-like effect and evocative sense of mystery.
Most of the so-called moonlight views were actually taken during the day time. Curtis had mastered the technique of severely underexposing his negative (six to eight stops) which when printed, darkened the tonal quality of the sky and exaggerated the heavy appearance of the clouds when printed. He paid careful attention to capturing the moment when sunlight hit the water at the exact angle that reflected a very bright surface quality resembling the path of moonlight.
Excellence in the quality of photographic work was an enduring concern for Curtis. In January of 1873 he wrote an article for Photographic Mosaics, an annual compilation of articles edited by E.A. Wilson, in which he deplored the practice of some greedy dealers who chose to distribute stereoscopic views of inferior quality, which they could purchase cheaply and sell at the most profit. There was also an implied rebuke for those of his colleagues whose work was less than conscientious and debased the professional integrity and prestige of reputable photographers.
Just as new theories, scientific discoveries and professional accomplishments are published in the journals of various disciplines today, the 19th-century photographers forged a network of communication through the photographic magazines that were published.

Fig. 7. Curtis No. 108, "Horseshoe Fall and Profile Rock - Winter."

Fig. 10. Curtis No. 264, "Whirlpool Rapids."
Humphrey's Journal, started in 1850, was the first periodical devoted to scientific progress in "photographic art". By 1877 there were seven American photography magazines in circulation, some having been started by entrepreneurs as vehicles for advertising their own products. Perhaps the most prestigious of these publications was The Philadelphia Photographer, which had been launched by Edward A. Wilson in 1864. His magazine contained much shared information from readers that did much to advance photography as a profession of quality, as well as a business.

Wilson was also one of the largest distributors of stereoviews in the country, and in 1873 he contracted to be the national agent for the sale of Curtis' views, which were sold wholesale by the gross. Curtis had established a national reputation for his wet-plate collodion, and attributed much of his success in capturing unusual effects, i.e. clouds, ice crystals, and breaking waves of the movement of water to the sensitivity of his collodion mixture.

"Whirlpool Rapids and Suspension Bridge" (figure 10) pictures a constantly recurring wave which was skillfully captured in leaping motion. The precise definition of the spray is such that individual droplets of spray stand out clearly against the backdrop of the dark hill. The strong straight lines of...
was due to his own collodion mixture used in his wet plate process.

"Horseshoe Fall from Canada" (figure 11), a view shot from Table Rock, has captured striking cloud configurations in addition to other details. The foliage that anchors the view to the bottom frame is as well defined as are the misty vapors of the spray of the Falls and the clouds in the sky.

Curtis was noted for novel and unique approaches to presenting scenes around the Niagara area. "The Bridal Veil" (figure 12) indeed resembles its title. The

the bridge and the gently curving cables from the suspension tower are juxtaposed against the ragged outlines of water and shore. This view represents one of the roughest stretches of water in the world, and the Suspension Bridge was an engineering marvel of its day. Indeed, many tourists flocked to the Niagara area as much to see this bridge as to view the falls.

Many 19th-century photographers are notable for light cloudless skies. The long exposure time needed to capture landscape details washed out blue skies and light clouds to present blank white above the horizon. If the negative was exposed for a shorter time to capture clouds, foliage lost definition, and when printed appeared black. Niagara Falls photographers were often more successful in capturing cloud formations because the exposure time was about equal for bright water and bright sky. In his advertisements Curtis claimed (obliquely) that the successful capture of clouds in his stereoviews

Fig. 11. Curtis No. 40, "Horseshoe Fall from Canada, Winter."

Fig. 12. Curtis No. 211, "The Bridal Veil."
shimmering waterfall duplicates the appearance of a long flowing bridal veil, and this allegorical imagery is particularly apt for an area renown as a favorite honeymoon resort. The triangular patch of cloudless sky is a deliberate framing device that balances and matches the slanting rock pile in the opposite corner of this view.

In 1876, at the American Centennial Exposition in Philadelphia, Curtis and Bierstadt, representing Niagara Falls, were named as being among the best landscape photographers in the country. By 1880, Curtis was cited as having produced the finest and most popular stereoviews in the nation.

Having conquered the challenge of stereophotography, by 1878 Curtis had turned his attention to a new field of endeavor. He had started to produce large size [oil] colored transparencies that far exceeded the size and quality of "anything in existence in this country" and had a "permanency of color which has so long baffled the trade in securing". His consistent attention to high quality was the true measure of Curtis' work, and he was justly proud of his reputation for excellence.

Although he continued to produce stereoviews, his work in the eighties was more varied, as he persevered in the refinement of oil colored transparencies, and also reproduced Niagara views permanently fixed on opal glass. The tourist trade was booming, and many were anxious to be photographed by this famous man. Curtis took advantage of the newly refined "No. 6 Voigtlander Portrait Lens" to return to the portrait business in the summer of 1880. Because his name was synonymous with excellence, Curtis was asked to endorse the Voigtlander lens in order to boost its sale.

Like a present-day athlete, Curtis was in demand to lend his prestige to new photographic products. The "Cramer Extra Dry Plate" was another product with which his name was linked. Gus Cramer owned one of the largest dry plate manufacturing companies, and it is likely that he established a business relationship with Curtis in the 1880s in order to further his own business venture. The wet plate process was being superseded by the pre-prepared dry plate process, so this was a mutually beneficial arrangement for Cramer and Curtis at that time. This business collaboration also could have been fun for those two men, as both were reputed to be affable, gregarious and fond of social activity.

Gus Cramer, known affectionately as "Papa Cramer", was a photographer in St. Louis, but he was better known for his long years of involvement with national photography associations, the arrangements he made for conventions and exhibitions, and among the select few, for the grand parties he hosted. The decade of the 1870s has come to be known as the "Fraternity Years" among photography historians in America.

Famous as one of the best landscape photographers in the country, George Curtis endeavored to make his mark locally as a portrait photographer. He made extensive alterations to his place of business in 1881, and it can be assumed that his work was financially rewarding because he moved his studio to the heart of the downtown area two years later. His new establishment was written up extensively in the local newspaper and lavishly praised. His quarters were handsomely carpeted and furnished, equipped with the newest and highest quality photographic instruments and background settings for portraiture, and were attended by an able staff of employees who had worked for him for many years. It was quite the largest and most elegant establishment in the area.

Despite his concentration on portraiture, Curtis' landscape views continued to be exhibited at national photographer's conventions: Milwaukee, 1883; St. Louis, 1886; and Minneapolis, 1888. At the 1888 Photographers' Association of America Convention, his Niagara Falls work was awarded a
gold medal for landscape photography, although William Henry Jackson won the overall first prize for landscape photography for his views taken the Rockies and other areas in the far western part of the country.

Many of Jackson’s panoramic scenes of remote, almost inaccessible landscapes, boiling springs and fantastic rock formations had a quality of extraterrestrial unreality, quite alien to the viewing experiences of eastern audiences. On the other hand, Curtis’ photographic style of composition and framing provided novel and unique interpretations of a familiar locality.

“Horseshoe Falls from Below” (figure 13) demonstrates Curtis’ talent for selecting a fresh and unusual angle for perspective. His use of tangential triangular formations creates a very striking linear effect in this composition. He has captured the feeling of motion in falling water and presents a dramatic close-up contrast of textures.

The uses of ice-mounts for framing “Central Fall from Ice Bridge” (figure 14) is unique to Curtis’ work. Rough edges of ice formations angle toward the middle of the frame, inviting the spectator to approach the Fall. Subtle gradations of light tones accentuate a frigid aspect, and highlight the contrast between the jagged, hacked-out appearance of the chunks of ice in the foreground with the rounded, ice-shrouded rocks that separate the viewer from...
the misty Center Falls in the background.

In 1893, George Curtis was elected president of the Niagara Falls Professional Photographers' Association. He exhibited his portfolio of Niagara views at the Photographers' Association of America convention of 1894 held in St. Louis, and was awarded a medal for "best views taken using Cramer Dry Plates". The American Aristotype Paper Company sought his endorsement for their printing paper, which was given added publicity in 1895, when this company sponsored a showing of his work at the Photographers' Association of America convention held in Detroit that year. The newly enlarged and expanded 1897 edition of the Niagara Falls guide book, *Views of Niagara Falls and Vicinity* included many beautiful views of the Falls taken by Curtis, and he rounded out the century by having a Cramer-sponsored showing of his Niagara Falls views at the Paris Exposition of 1900. Also, *The Niagara Book*, published in 1901, and co-authored by Mark Twain, prominently featured photographs by Curtis.

During the early 1900s, Curtis sold some of his stereo negatives of Niagara winter scenes to the Universal Photo Art Company who copyrighted, printed and marketed them. Some of the negatives that were printed were at least thirty years old as evidenced by the inclusion of Terrapin Tower, which was torn down in 1873. Despite the fact that the negatives were old, they produced fine detailed prints, which once again attests to his skill in producing superior quality negatives.

By the turn of the century, George E. Curtis had become known as the "Grand Old Man of Niagara". The Photographers' Association of America convention of 1906 was held in Niagara Falls in honor of Curtis, who at age seventy-six, was the last of the great pioneers of Niagara Falls photography still living.

The last known picture Curtis took combined a view of the Falls, the location that had made him famous, and a depiction of the newest technology, electric light. "Niagara at Night, Photographed by Electric Illumination", though striking in its own way, is not a great work of art. It marks the passing of an era that was great in American history, and in the development of photography as an accepted medium of artistic visual expression.

Information is scanty about the details of George Curtis' personal life. He sang in the Episcopal Church choir in his younger days, and was reported to have sung in outdoor concerts near the brink of the American Falls. (This is a more genteel form of entertainment than customary at that site of acrobatic tight-robe walkers, barrel-rollers over the falls or through the rapids.) He married Edith Symonds and they had two children. His daughter, who was also named Edith, became an actress, and her mother lived with her in New York City for a number of years. Their son Edward S. Curtis would become an illustrious photographer in his own right who specialized in the depiction of the American Indian.

George Curtis was often referred to as being "highly esteemed, socially active, convivial, and with a host of friends". There can be no doubt that he worked long hard hours and was devoted to his profession, but the picture of the man that emerges from each personal reference to him differs markedly from the quiet, withdrawn, and almost obsessionial images of Bierstadt and Barker.

Curtis was greatly troubled by rheumatism during the last years of his life, and had become bedridden before he died on December 17, 1910. He never traveled to remote areas to photograph strange exotic places, but made his mark through imaginative and vivid portrayals of a familiar home territory. During his eighty year life-time, he witnessed tremendous change in his home town, his native country, and in his chosen
profession. He made significant contributions to each.

**Conclusion**

Stereophotography played an important role in the development and refinement of photographic technology almost from the time of Daguerre's early invention. There is a gripping immediacy in the viewing of stereographs through a stereoscope that captured public interest in the 19th century, generating a ready market for this unique form of entertainment, and concomitant incentives for continual research and development to supply the demand. Niagara Falls had become a symbol of the philosophical and practical preoccupations of the age; nature as awe inspiring manifestation of the "sublime", and raw power to be harnessed in the service of the Industrial Revolution that was roaring like a cataract over the western world. Thus it was that Niagara Falls became an important site for pioneer photographers who wished to record the image of this mighty spectacle, and many stayed in the area and became the nucleus of a growing network of this new craft.

Charles Bierstadt, George Barker and George E. Curtis were three of the best photographers of their time, and each built fame and fortune centered on his long association with Niagara. The contributions of these three men to the advancement of photographic technology and the execution of landscape photography was widely recognized through their participation in national photographic associations. The Albert-type printing technique introduced and popularized by Bierstadt allowed for inexpensive mass production of photographic prints in America. Barker was very competitive and became conspicuous for the medals and letters of commendation he received at photographic exhibitions. He never lost an opportunity to publicize the utility of photography as a medium for documentation and influence of public opinion, in addition to its customary role as entertainment. Curtis was the experimental genius who developed the formula for improved collodion which was sold in large quantities throughout the country. He had great insight into the nature of light and how to use it to capture subtle gradations in tone. The sensitivity of his emulsion enabled other photographers to improve their technique and capture subtle details with greater clarity.

Working in the same area, and wooing the same customers, Bierstadt, Barker and Curtis relied on marketing techniques as well as artistic perspectives to sell their wares. That each was a successful business man in addition to his genius for individual interpretations of a common subject matter, is a tribute to their dedication, artistic insights and dogged pursuit of excellence.

Each of these photographers demonstrated a unique approach in his work, exhibiting exceptional insight into the nature of photography as a medium of artistic expression. Bierstadt's work was noted for sharp foreground details to delineate distance and relative size. His stereographs imparted a feeling of deep space through the use of dark shadows; the chiaroscuro effect emphasized form and substance. He had an eye for composition. The division was clear between foreground, middleground and background, and repeating patterns of form or line are prominent in his pictures. Barker characteristically sought unusual vantage points for dramatic effects. He was more apt to use people in his scenes, in story telling situations (e.g. Fred's Cabin) for perspective and relative size, and as a foil to the grandeur of the view.

Most well known for moonlight and winter views, Curtis was outstanding for his complex set of perceptions which created tension in his scenes between photographic reality and mythic archetype. He achieved wonderful effects in high key gradations of tonality.
Bierstadt’s “Whirlpool Rapids” (figure 15) is an example of his use of chiaroscuro. Black silhouettes of the background foliage and the deep dark shadows in the water are contrasted with lighter tones of spray. The tight composition with the train on the Suspension Bridge caught in the middle of the scene, and almost in the middle of the bridge, communicates tension. There are three distinct planes; foreground, middleground and the suggestion of infinite space beyond.

Barker's view, titled “Pathway Under the Horseshoe Falls” (figure 16) has a spooky suggestion of spectral drama with falling water caught in frozen stillness, stairs winding upward toward an unknown destination and the wraith-like ghost figure staring out into the eerie emptiness of a stark white background. This is an example of an early technique for capturing “ghost” figures in a pictorial composition, because the long exposure time allowed for a partial and seemingly transparent impression of a human figure. This is another example of “trick” photography that was possible through the imperfect photographic technology of the day. Many ghost figures appeared by accident in less professional prints, but this scene was obviously composed for its dramatic effect.

In “Below Cave of the Winds — Moonlight” (figure 17) Curtis creates a remote, unearthly quality of a mystical, romantic moonlight scene. The unusual angle of this perspective accentuates the enormity of the flow while at the same time, there is a muted billowy softness that lends an air of serenity to this composition. Curtis became very well known for his moonlight views and although this is a very early example (i.e. 1860s) it provides a foreshadowing of the striking effects that built his reputation as a master of subtle variations in shades of gray, and his ability to capture the atmosphere of a moonlit night in pictures that he took during the light of day.

The following three views, which were taken on the same day, of the same event, by Bierstadt, Barker and Curtis, highlight the differences in style and psychological insights demonstrated in their work. The pictured incident shows Signorina Spelterini performing a high-wire crossing above the Niagara Rapids, wearing peach baskets on her feet, in July 1876.

In figure 18, Bierstadt emphasizes differences in tonal contrast, e.g. light figure and dramatically light-reflecting rope against the dark silhouette of the cliff. The strong framing provided by the Suspension Bridge holds the view down, focusing attention on the woman performing her act.

In figure 19, Barker captures Spelterini in the act of lifting her leg to the drama of the activity in which she is engaged. He has accentuated the converging lines of the rope that steadies the tightrope and the curving cable that supports the Suspension Bridge. More of the river is included in the foreground to dramatize the height of the tightrope and the danger of the act.

In figure 20, Curtis has captured a partial view of the Falls in the background (more clearly visible when seen through a stereoscope), the view toward which the woman appears to be looking. He has succeeded in portraying her light figure against the light toned background of the river rapids. The scene is anchored with clearly defined foliage in the lower left-hand corner of the frame, so that the spectator seems to be observing the view from the tree tops.

In the 19th century, stereophotography was considered a combination of art with science. There was much debate in Europe about the way to judge photography. Was it art of science? Bierstadt, Barker and Curtis were much clearer in their own vision of photography than were the Europeans of that time. Their work reflected...
mastery of this new medium. They pioneered in developing photography in America, each making his own important contribution. They were the undisputed leaders of the tradition from the 1860s until the turn of the century, and American photographers looked to them for leadership and guidance. Although the scenic beauty of Niagara Falls continued to excite the interest of professional photographers who visited the site, they became convinced early on, that there was little new that could be added to the magnificent photography that had been captured during the mid to late 1800s. The three famous resident photographers, Bierstadt, Barker and Curtis all had studios where they sold not only millions of their own stereoviews, but also large photographs that were inexpensive, i.e. fifty cents for a picture of very high quality, measuring seventeen by twenty-two inches.

William Henry Jackson was the only photographer who was able to penetrate the near monopoly on the market enjoyed by these three, with his innovative color photograph Niagara postcards, made possible by the new technology of color lithography which had been developed in 1898. These postcards were available only to the tourist trade at the site. At the turn of the century, an international art photography movement, the Pictorialists,
began. Their aim was to develop photography into a fine art. Influenced by the Impressionist painters, the Pictorialist style was characterized by its dream-like quality, which sacrificed detail for mood, placing emphasis on interpretation and emotion. One of these groups, the Photo Pictorialists of Buffalo, active 1906 to 1914, photographed the Falls extensively. Their work was significant, as it marked the last major effort of art photography of the Falls at Niagara. The heyday of stereographs as art had waned, although documentary and cheap lithograph stereoviews continued to be produced and distributed widely until the 1920s.

In the latter half of the 19th century adults were very much interested in art, travel, and greater understanding or familiarity with far-away places. Stereographs provided a window on the world that was unlike two-dimensional visual art. After the turn of the century, there was a big push to use stereophotography as an educational tool in the schools, and it became associated with children’s education. Also, there were competing forms of entertainment for adults, such as radio and the “picture show”, where photographs moved, eventually talked, and finally were produced in living color. People spent their money going to the movies, and anything that makes money attracts more money for further refinement and development.

In the 1860s, stereophotography captured the interest and imagination of the public, and created a demand for views which spurred the development and refinement of photographic technology, but then photography took off in other directions. Now that the newest fad is television [VCR movies] people increasingly are staying home, a reversal of the movies’ pull away from the living room. However, television is an activity that can be enjoyed in a group, unlike stereoscopic viewing, which is a more individual experience. Shared enjoyment has a strong attraction.

The magic of Niagara Falls remains a magnet that draws millions of tourists to see this magnificent sight each year. However, for many who have never visited the Falls, there is today almost as much fantasy in ideas about Niagara as existed during the 18th century. The grandeur and enormity of the Falls is diminished by images associated primarily with acrobatic stunts on tightropes, daredevil rides over the falls in barrels, and sly innuendoes about honeymooning couples. This was not so one hundred years ago, when the general public was familiar with actual scenes as portrayed in stereographs, and such concepts as “sublime” were the most common associations. Ignorance about the actual configuration of the Falls is such today that photographs in books are sometimes printed backward with impunity, perhaps for artistic effect, because few if any will know the difference.

This research has been limited. The sparsity of information in original sources points to an obvious gap in the history of American photography. It is hoped that this study will add to an appreciation of the germinal efforts that were so essential to the development of modern photography.

Sources
Ralph Greenhill and Thomas Mahoney, Niagara... (Toronto: University of Toronto Press, 1969) 8, 82, 84, 123.
The Art-Union 89 (1847).
William Culp Darrah, Stereo Views. (Gettysburg, 1964) 97, 169.
The Photographic Times, July 24, 1885 and Jan., 1873.
The Beacon #1 (1889): 78.
The Photographic Times and American Photographer, Sept. 1, 1893; July 24, 1891; Aug. 23 1899.
Thomas Holder, A Complete Record of Niagara Falls and Vicinity. (Niagara Falls, NY, Self-published, 1882) 90-91.
St. Louis and Canadian Photographer, Sept. 1895.
An earlier series of three articles by Horst Hoyer, beginning in the Sept./Oct. '88 Stereo World, discussed the geometric principles of drawing stereo pairs and ana-
glyphic images. The articles showed examples of such images generated using a computer. In this article I will show several images, using a computer in some-
what different ways, but employing the same geometric principles. The examples will use four different procedures: taking two pic-
tures, computing a stereo pair, manipulation of background pat-
tern and manipulation of drawing elements.

Hyper-stereo by “Taking Two Pictures”

There are astronomy programs available for personal computers which include the three dimen-
sional positions of the various stars. Some of these programs allow the user to “move around” in space and to view the stars from various positions. The software contains position and brightness information for most of the brighter stars visible to the eye. Each star is plotted in the form of a spot, with larger spots being used for brighter stars.

With such a program, using the computer as a camera, we can make hyper-stereo pairs. For this, we need to choose appropriate locations from which to “take” the left and right frames, so that there will be a strong impression of depth when the images are viewed as a pair. This requires that we consider the distance to the stars in the region of interest. Suppose, for example, we want to make a stereo pair showing the constellations Orion and Taurus. The distances to the major stars in the scene vary from about 50 to 1600 light years. We’d like to exaggerate the depth effect, so let’s choose a distance of about one-light year for the base-
line.

We stand in the vicinity of Earth, look in the direction of Ori-
on and take the left frame of our pair. Then we take a “giant step” one light-year to the right (about six mil-

Fig. 1. Orion and Taurus.
Computing a Stereo Pair

Another kind of group of stars is called a globular cluster. This is a collection of many (thousands or even millions) of stars that exist as a closely spaced group, held together by gravity. Such clusters are a spectacular sight in a telescope. A globular cluster can be generated on a computer, with the position of each star calculated using the appropriate gravitational effects. Then we can compute two views of this cluster and present the views as a stereo pair. This is something we can't do from Earth, with a real cluster.

An example of a computed globular cluster of one thousand stars is shown in Figure 2. This view is from a position ten core-radii from the center of the cluster. (Most of the stars in a cluster are within the core radius of the center.) Using the capability of the computer, we can move closer to the cluster and see more detail of the spacing of the individual stars. The view in Figure 3 is the same cluster from a position five core-radii away in the same direction. From this distance, the core sphere would nearly fill the frame of the picture.

Random-Dot Stereograms

In the late 1950s Bela Julesz, then at Bell Telephone Laboratories, was studying the process by which we interpret depth, both in real space and in stereo pairs. He developed random-dot stereograms as a tool for this study. In these stereograms, a silhouette is seen floating above a random background (or is seen as a hole in the random pattern). This result is dependent entirely on manipulation of the background pattern. Paul Boyer showed a way to make such stereograms in the March/April '90 issue of Stereo World. Figure 4 is an example of a random-dot stereogram generated using a computer program. (The silhouette is the NSA logo.)

Stereograms From Drawings

It is relatively easy, using some computer drawing programs, to modify a cartoon-like drawing to create some apparent depth. To do this, all we need to do is to manipulate elements of the drawing. An example is shown in Figure 5.

Beginning with a basic drawing of a clown's face, the first operation is to duplicate the drawing and place it beside the original. Next, parts of the drawing on the right are selected and displaced a few pixels to the left or right, depending on whether they should be seen as nearer to or farther from the viewer. The result of each operation can be viewed on the screen and the displacement adjusted for the desired depth.
effect. In this case, the eyes are in the same plane as the head outline. The bow tie is shifted one pixel, the mouth two, the nose four and the wording in front of the tie is shifted five pixels.

To add interest to this drawing, the eyes were constructed as random-dot stereograms. When the pair of faces is viewed as a stereo pair, cent signs are seen standing out from the eyes. To provide a surprise effect, they were constructed so that if the eyes of one face are viewed as a stereo pair, a dollar sign is seen instead of a cent sign. (It may be easier to see this if the picture is covered, except for the eyes of one face.)

I've described four ways to enjoy stereo effects on a personal computer. There are clearly others, such as stereo pairs of molecular models, etc. Let your imagination be your guide.

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Fig. 5.

The author's program used to make this and similar random-dot stereograms is available, as is a program used to make stereo pairs of globular clusters. They run on Macintosh computers with 512K or more of memory. Send $5 and a blank disk to: J.E. Schwenker, 61 Tulip Lane, Colts Neck, NJ 07722.

Sources

by John Bradley

My reference to Vistascreen in an earlier article (Stereo World May/June ’90, page 10) prompted such a number of inquiries that it seems worth giving some space to this amusing little 3-D system. To my mind, Vistascreen provides some of the most unusual commercial stereo from Britain in the 50s and 60s. Other producers made their reputations from the world’s BIG sights — the Grand Canyon to the Taj Mahal. Vistascreen thought small. Not only was the format modest (45x107 mm) but so were the subjects. Who would have thought there would be a market for a boxed set of ten views of Heysham Beach Caravan Site? Vistascreen did. A photographic tour of a model village? Again only on Vistascreen.

Based in London and operating in the 1950s and early 60s, the company produced a small folding viewer in white plastic to be sold at tourist locations in Britain and by Mail Order. Views were in sets of ten black & white [photographic print] pairs on thin card. Each set of cards was glued into a folding cover, like a small ten-page paperback book. This in turn was packed in an outer cardboard box, with the company logo and details of the subject printed on the front.

The 250 or more sets of cards Vistascreen produced provide a wonderful documentary record of Britain on holiday in the 1950s. The sets showing rather stiff formal views of Historic Houses are probably the least interesting, but many of the tours of major towns are full of lively street scenes. My own favorites are those showing seaside resorts. As anyone who has visited England will know, we are not famous as a “sunshine holiday” location. Nev-
"PORTMEIRON N. WALES, FOUNTAIN AND COLONNADE" Most Vistascreen prints are quite sharp, with good tonal range and little fading. Titles are exposed on the double weight paper with the images, and nothing is printed on the backs.

"KINGSTON-ON-THAMES, CHURCH ST. AND BAPTIST CHURCH" Series 209. Shopping in an outer London suburb seems an unlikely subject for stereo views, but the passing of time adds interest to these mid-fifties street scenes with their general working class orientation.

"KINGSTON-ON-THAMES, CHURCH ST. WITH FLOWER SELLERS" SERIES 209. Everyday life in small towns has rarely had such attention from a commercial view publisher.

"OCEAN LINERS, R.M.S. QUEEN MARY Cunard Line" Series 47. Something of a tourist attraction even in the '50s, the liner, built in 1934, is seen here at the Southampton docks.

"Beach Caravan Site Heachham, CAFE NORTH BEACH HEACHAM" Series H.115. A whole set was dedicated to the beach caravan site at this tiny Norfolk holiday village. This humble establishment with its bare-bulb lighting was faithfully stereographed by Vistascreen – and what other publisher would also have included a view of the cluttered parking lot behind a long row of day cabins?

STEREO WORLD January/February 1991 23
Cover of a Vistascreen view list.

The Vistascreen folding viewer on its box. (Photo by Phil Brown.)

"PORTMEIRON N. WALES, BATTERY SQUARE" Series H.221. This bizarre Itallienate fantasy village was built by an English eccentric earlier this century. Perched on the rugged North Wales coast, it provided the backdrop for the 1960s cult TV series "The Prisoner". (Some views are shown in an enlarged format to show detail better.)

"CLOVELLY, CLOVELLY DONKEYS" Series 307. The steep streets of this old Cornish fishing village make it impossible to drive a car up or down. Donkeys, which at other holiday resorts provide an entertaining ride for tourists here serve a real purpose delivering goods to the households.

Nevertheless, Vistascreen accurately records the determined efforts of folks in post-war Britain to enjoy themselves at the seaside. A "Junior Interest" series included some rather tame sets of animals, but also two splendid circus sets and a fine set of ocean liners. The travel theme was continued with "Aeroplanes" and "Locomotives". The last three sets were issued in a special 3-set pack with viewer, aimed at the children's Christmas market. In the "General Interest" category was an unusual set of "London Curiosities", as well as sets of "Glamour Models" and "Art Studies".

From above, the Vistascreen logo can be seen incorporated into the base of the viewer. (Photo by Phil Brown.)
"LONDON CURiosITIES, TELEPHONE SEDAN CHAIR AT SHEPHERD'S RESTAURANT" Series 53. This novel set showed some of the more unusual and quaint sights of London – the sort that would never have appeared on a View-Master reel!

"LOCOMOTIVES, MIXED TRAFFIC TANK 2-6-0" Series 25. The little engine that could? This standard design Tank Engine was produced for British Railways for light passenger and general freight work. The small "SC" plate at the front refers to a "self cleaning smoke-box". (In fact a rather environmentally unfriendly method of blowing even MORE of the dirt and muck out of the stack!)

The company seems to have had its last successes in the early 1960s when it produced a version of its viewer for the Weetabix breakfast cereal promotions, together with five sets of color [litho] cards. "Beauty Plastics" of Hong Kong produced an unlicensed copy of the viewer at about this time, which sold in Woolworths with sets of freehand 3-D color cartoons.

For the enthusiastic collector, examples of both cards and viewer can still be found at collectors fairs. It is noticeable though that most viewers turn up with just a couple of sets of cards, suggesting perhaps that few people became keen collectors of the material after their initial holiday purchase. One consequence of this is that I'm still a long way off finding the full series – so if anyone out there has a boxfull in the attic, let me know!

I am always keen to correspond with other enthusiasts, and can be contacted at The Mede, Moor Road, Ashover, Chesterfield, Derbyshire, S45 OAQ, England.

"MODEL VILLAGE BOURTON-ON-THE-WATER, GLOUCESTER, FOOT BRIDGE AND RIVER WINDRUSH" Series H 226. This carefully constructed scale model of a Cotswold stone village in Gloucester is one of several examples to be found around the country.

"MARGATE AND CLIFTONVILLE, MARINE SANDS MARGATE" Series 36. Vistascreen obviously had little interest in trying to add glamour to their resort views.
Trilogy Camera Back
With New Name, New Plan

Recently seen at Photokina in Germany, and the Photo Marketing Association show in Las Vegas, the camera already known as the Trilogy has appeared under a new name and marketing strategy as the "ImageTech 3D 1000" stereo camera. (See Nov./Dec. '89, page 22.) The camera itself is identical to the 3-lensed Trilogy, except for the ImageTech name on the camera body.

The big difference is that under the banner of Image Technology International, Inc. of Norcross, Georgia, the camera is now being marketed in the traditional way to camera dealers, instead of through the multi-level marketing "Independent Distributors" of Nishika and Trilogy.

The immediate result is a significant suggested retail price drop from about $250.00 for the Trilogy, down to $189.95 for the ImageTech 3D 1000. The cost of the prints, available only with "Prepaid Processing Coupons" (to be mailed in) is a suggested retail of $16.00 for a 24 exposure roll (16 prints) and $24.00 for a 36 exposure roll (24 prints). The coupons will be sold by the same dealers that sell the cameras. Now it remains to be seen whether traditional camera shops decide to stock the new cameras.

In spite of claims of improved 3-D print quality, my personal opinion of the samples I've seen is that the 3-lens prints are more forgiving of parallax problems (less jumpy backgrounds), but that they seem to have less depth effect overall. One has to be very careful to compose a very strong foreground and middleground to take advantage of this system.

Three-image lenticular prints make it more likely that the eyes will see adjacent image bands, reducing jumpy backgrounds (flipping). One of the images is positioned behind the CENTER of the lenticule, another claimed improvement in sharpness over four-image prints.

Loreo Strip-Down

David Burder has done another of his surgical examinations of a new stereo camera, with the Loreo (Sept./Oct. '90 NewViews) going under his screwdriver this time. Among the observations he adds to our previous comments on the camera are the fact that the shutter release button presses back toward the camera to minimize shake and that the rewind button must be held down through rewinding the entire roll. He found the viewfinder large and bright, but requiring one to look through it centrally to avoid misframing. There is noticeable flash fall off at the tops of the pictures, which could benefit from a slight repositioning of the flip-up flash mirror. The camera lacks a contact for external flash as well as a tripod socket, and is not built heavily enough to have these fitted.

The camera is easy to dismantle, and self tapping screws are used throughout. Removing the front of the camera provides access to the one-piece plastic mirror assembly, which is completely silvered - everywhere. As only four mirror surfaces actually transmit images to the lenses, the remaining dozen or so can be blackened using black masking tape or flat black model paint. (David Burder had few prob-
lems with internal reflections, but wider field testing by several NSA members has shown how easily side lighting can ricochet inside the silvered mirror assembly and strike the film, as seen on page 15 of Nov./Dec. '90.)

The film plane is very angled but the curved pressure plate performs perfectly to give sharp results and easy film transport. The small aperture gives excellent portraits without need for close-up lenses. The stereo base is too great to justify fitting close-up lenses for work closer than two and a half feet.

With flash, the camera really needs the recommended 400 speed print film. In daylight, ASA 100 works fine but the latitude of ASA 400 color negative films would allow them to be used in all cases. The stereo window can be affected by the (in effect) random way boarderless prints are trimmed in processing. (As one side is already slightly larger in the negatives from some Loreo samples, off-cen-

ter trimming by a lab could either correct or exacerbate unbalanced windows. The photo at the top of page 29, Sept./Oct. '90, shows an entire untrimmed Loreo negative.)

Makes You Wundr...

When NSA member Joseph Kalinowski saw the ad for the "Wundr Vu" in the January issue of Popular Science, he decided to check it out. It's makers claim the "Wundr Vu 3D Stereoscope" for TV movies can "convert that ordinary flat lifeless picture into an exciting 3D effect" the extent depending on "the optical quality and the physical perspective of the picture".

What he received for $14 was a small cardboard box with a window for each eye. Inside the window are curved pieces of clear plastic and heavy foil with slits cut in it. The instructions reveal that the vertical slits are for the left eye and the horizontal ones for the right - also, "view close to the screen" and "to adjust view simply move stereoscope up or down".

Indeed, the Wundr Vu he sent to Stereo World has the astounding ability to make a flat video image look EXACTLY like you were viewing it through pieces of foil with slits in it! The fact that the left and right eye images are distorted in different directions does result in some fleeting impressions of very slight depth in totally random slices of a TV picture. The impression is the sort that seems to disappear when you try to study it more closely, unlike the very real Pulfrich effect produced by a simple neutral density filter placed over one eye.

Among the devices advertised to produce simulated 3-D effects in flat images, the Wundr Vu does at least do something to the picture, and it may have a future as a party gift among stereo club members. OR, sticking it in your gas tank may triple your mileage!

"Hondo" Heads for the Box in 3-D

The John Wayne 3-D classic western "Hondo" is scheduled to run in anaglyphic 3-D on a syndicated network of "at least 150 stations" around June 24-26, 1991. John Wayne's son Michael has inherited the rights to "Hondo", and has so far refused to release it on video. The June showing will be a benefit for the Leukemia Society of America. Glasses will be sold at local retail stores in areas where the film will run, so watch for the ads.
Wholesale 3-D Slide Mounting

I have recently discovered that QUALEX, Inc. is offering stereo (Realist format) slide mounting service throughout the United States. If you haven’t heard of Qualex, that is because they are a “wholesale” processor, meaning you can’t send film to them directly. They process film for camera stores, drug stores or other retail outlets which offer film processing.

In talking to one of Qualex’s customer relations managers, I was told that the easiest way for anyone to find out where their nearest Qualex affiliated store is would be to call the Qualex toll-free telephone number: (800) 873-3353.

The other thing to remember is that the store clerks are usually not familiar with stereo, and may even say that the service is not available. If they go to the trouble, it can usually be found listed in the price book for the lab services, or just trust the Qualex referral and be sure to write “Stereo Slide Mounting” in the Special Instructions box on the processing envelope.

Qualex uses the cardboard heat-seal type of mount, very similar to the discontinued Kodak cardboard type of mount. The mounting is still basically a hand-assisted operation, so the quality of the mounting may vary from area to area, and even from day to day depending on the skill of the operators handling your film.

Fed Update

We have not been able to get any further news on the Soviet FED stereo camera, although your NewViews editor has found the address of the factory and written to them—still with no reply.

We have heard that more individual cameras seem to be cropping up. Apparently they are being brought out of the USSR by emigrés who are bringing “hard goods” instead of worthless Rubles out with them. We heard from one reader who got one in a camera repair shop in the San Francisco area, and another who bought one in a Munich camera shop (which had 3 in stock!). Prices seem to be in the $500 range, but this is by no means a meaningful indication of anything. What it does mean is that Feds are still quite scarce, and that one could crop up just about anywhere. Keep your eyes open!

(See Jan./Feb. ’90, page 26.)

This column depends on readers for information. (We don’t know everything!) Send information or questions to David Starkman, P.O. Box 2368, Culver City, CA 90231

Nishika Offers 16x20 3-D Prints.

Nishika is now offering 16 x 20" lenticular 3-D prints from negative film shot in Nishika or Nimslo 4-lensed 3-D cameras. This service is not on the order form but their customer service department has informed us that you should add “ATTENTION: COMMERCIAL DIVISION” on the outside of the Nishika mailing envelope. Then on the back of the order form write in your order with the following prices:

16 x 20" print - $85.00 each
16 x 20" transparency - $80.00 each

(The transparency is a new service not available in the smaller sizes.) For more information call the Nishika Commercial Division at 702-435-9000. □

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<td>Manual operation gives the operator complete artistic control of dissolve rates.</td>
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<td>Dual and single focus controls. Conveniently grouped vertical and horizontal lens controls.</td>
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<td>A cue signal is illuminated on the projector. Operated from on top of any two track tape recorder, signals the operator for a change slide.</td>
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<td>Hinged cover provides easy access to projection lamps.</td>
<td>Hologen lamps.</td>
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This projector is custom made in limited quantities. The current price is $1695. For ordering information or additional details write:

Brackett Engineering
P.O. BOX 493 E. Sandwich, MA 02537
Tel. (508) 888-2180
Reflections on a New Year

Every year is special for some reason and 1991 should be no exception. After all, it reads the same backwards as forwards, for one thing. Maybe that bodes well for stereo, which also needs everything in homologous pairs. Those who dwell on numbers will tell you that usually we have to wait 110 years for that to occur again but since we are near the end of the millennium, eleven years will suffice to give 2002 AD. After that it is 110 years until the year 2112 again challenges us.

Closer though is 1993, the centennial year of the Stereoscopic Society, now only two years away. True however, the American group was not organized as such until 1919 (those same digits again...and in the correct order for a stereo pair). Let us summarize the changes the Stereoscopic Society has experienced as it enters the last decade of the 20th century.

Changes

First of all, our name was changed to The Stereoscopic Society of America, which comes closer to describing us. The erstwhile "Branches" of the Stereoscopic Society, first formed in England, have long been independent entities. That in no way has affected the warm fraternal feelings shared by members of the several formerly national branches who remain in contact with each other. But it does reflect that they are now separate organizations.

The most melancholy event for the Stereoscopic Society in 1990 was the death of Louis Smaus. He was one of our most senior members in length of active membership and was the long time transparency secretary and especially secretary for Alpha Circuit. One can never replace someone like Louis Smaus, whose talents were unique. One can only hope to carry on and encourage the new leadership to meet the challenges in their own way, and put their own stamp on the Society.

Matthew Rebolz of Los Gatos, CA is the new secretary of the Alpha Circuit, replacing the late Louis Smaus. We have two other transparency circuits which circulate stereo views in the Realist format. Beta Transparency Circuit is administered by Mark Willke of Portland, OR, and Gamma Transparency Circuit is under the stewardship of Alfred Paterson of Shelton, WA, who serves as secretary for that group. An additional transparency group circulates stereo views in the 35mm 2x2 matched pair format. Norman B. Patterson of Wesleyville, PA has served as secretary since this circuit was inaugurated more than two years ago. As fate would have it circumstances have caused turnovers of all of the transparency circuit's officers within the last couple of years.

Among the printmakers, things have been equally fluid. Those who make viewcards seem to be a particularly close knit group of enthusiasts whose growth in numbers caused a painfully necessary splitting of the group into two circuits. This also coincided with the serious illness of the print secretary, Bill C. Walton of Columbus, GA, who was forced to curtail his activities. We now have two groups cooperatively adjusting to all of the changes. Judy Proffitt of Richmond, VA has taken over as secretary of the O-Group. Dr. Dale Hammerschmidt of Minneapolis, MN, who did the lion's share of the difficult work of splitting the print group, is secretary of the C-Group. Bill Walton has returned as secretary of Speedy Circuit (which limits its membership to 12 or 13 members and one folio) after a recovery period from his frightening bout with food poisoning.

Membership

After an unprecedented period of membership growth, applications have fallen off of late. This not only gives our Corresponding Secretary a needed respite but allows us to deal more effectively with absorbing all of the changes which have occurred. We are now in position to accept new members in all of the several categories of stereo view making. Stereo photographers interested in joining the Society should write to the Corresponding Secretary, Jack E. Caven-der, 1677 Dorsey Ave., Suite C, East Point, GA 30344.

Voting Results

Speedy Print Circuit has reported on the voting results for calendar year 1990. The results show a fairly even distribution. Printmakers scoring 15 points or more were: Ray Bohman 35 pts, Brandt Rowles 27 pts, Bill Patterson 27 pts, Judy Proffitt 25 pts, Bob Kruse 15 pts. Favorite stereographs were "Encampment at Farm Meadow" by Judy Proffitt, "Ungentine" by Brandt Rowsle, and "Norman Castle" by Bob Kruse.
In 1988, NSA member Suzanne Williams visited Easter Island and took a number of stereos with her View-Master Personal camera. She found the island’s unique statues irresistible subjects and perfect for 3-D photos. Her interests in stereography, the island, and its famous stone sculpture represent a combination which is apparently extremely rare. We have as yet been unable to locate any other stereographs (commercial or amateur) of Easter Island from any source or time period, despite the wide public interest in it following publication of the popular books by Thor Heyerdahl. Suzanne wonders if her images are the only stereos anyone has bothered to take there. Easter Island’s many mysteries are what she finds intriguing about the place, and perhaps the final one is the lack of stereographic coverage. Anyone knowing of any stereo prints or slides of any type or age taken on Easter Island is invited to contact the NSA.

Close-up of moai on ahu. Notice the cavities where coral and obsidian eyes were inserted. (Ahu Akivi.)

On Easter morning, Sunday the 5th of April, 1722, Jacob Roggeveen, an explorer from the Dutch East India Company was the first Westerner to chart the island. He named it in honor of the day. Although the expedition stayed just a few hours on land, the first European contact was brutal: some of the islanders were shot by a sailor who had been robbed. It took fifty years for the island to be visited again, by Spaniards in 1770 and by Captain James Cook during his second voyage in 1774.

In 1805, an American slave runner raided the island to bring free labor to Chile. After 3 days at sea, the prisoners jumped from the ship and swam toward their island. Over the next few years, other ships tried to raid the island but were not able to land due to the hostility of the inhabitants. The people of the island suffered killing and raids for the next 25 years, as well as syphilis brought by American whalers. In 1862, eight Peruvian ships raided the island. A dozen islanders were shot dead, including the island king, and two hundred were taken away, forced to collect guano on the Peruvian coast.

The Catholic Bishop of Tahiti protested against the ongoing slave trade, and with the help of the French Ambassador in Lima, got the Peruvian authorities to return the captives to Easter Island. Of the thousand slaves that had been taken, only fifteen were to return, bringing back with them smallpox and other contagious diseases. At this time, the population was at its lowest point, one hundred and eleven people.

By the 1860s, missionaries from Tahiti had settled on the island and started to convert the people to Christianity. They stayed until 1871, when hostilities broke out, forcing the missionaries to leave. In 1866 a French captain, Dutroux-Bornier, settled on the island as a sheep rancher. His greed for land involved killings and larceny, and he was eventually killed by the islanders. In 1888, France relinquished all rights to the island, and it was annexed by Chile.

The prehistory of the island is divided into two opposing theories. Generally, everyone agrees that the island was settled around...
300 B.C. by Hotu Matua. Most archaeologists believe the expedition came from Polynesia (either Rapa, Rarotonga, Mangareva, or the Marquesas). The other idea, advanced principally by Thor Heyerdahl, is that the first settlers came from South America.

Twenty-three hundred miles from Chile, Rapa Nui marks the eastern corner of the Polynesian triangle, with New Zealand as the western corner and Hawaii as its apex. Although the 35 square mile, triangular island is situated below the Tropic of Capricorn, it does not fit the romantic idea of a south sea island. Its land is barren and windy (the inhabitants have 27 words for “wind”). Isla de Pascua, as the island is known in Chile, is also called Rapa Nui (The Big Rapa) and Te Pito O Te Henua, which in Polynesian means “The Navel of the World”. There is no atoll or coral reef, and there are no rivers. A large forest once grew on the island, but all the trees were cut down. It was formed by three volcanoes, the highest being 536 meters. There are no indigenous mammals.

The original people as described by early discoverers were tall, some of them with European features, fair skin and red hair tied in a top-knot. They dressed in garments made from dry grass, women’s hair, or tapa cloth (pounded bark from the paper mulberry tree), and wore feather headaddresses. Both men and women were heavily tattooed. People lived in long, narrow huts and resided in caves during wartime. The islanders today number about 2000. They speak Spanish as well as Rapa Nui (Polynesian). Like their ancestors, they show great skills as sculptors.

Easter Island would perhaps not have its mystique if it were not for the giant stone statues, known as moai. I was in progress on the first paved road and Easter Island is a scheduled half-day stop on a South American tour. I could still walk freely over its surface of volcanic rock among caves and petroglyphs, ancient foundation stones, obsidian chips and arrowheads, and stand within the broken and scattered moai. I could go anywhere, free to touch and see and experience the excitement of a true mystery - and ponder; who? why? when?

Slipping Away

I feel fortunate that I was able to visit Easter Island before its isolation slipped away. The signs of inevitable change are already appearing. Work was in progress on the first paved road and Easter Island is a scheduled half-day stop on a South American tour. I could still walk freely over its surface of volcanic rock among caves and petroglyphs, ancient foundation stones, obsidian chips and arrowheads, and stand within the broken and scattered moai. I could go anywhere, free to touch and see and experience the excitement of a true mystery - and ponder; who? why? when?

Most captivating was the sculptor’s quarry, with its hundreds of statues. The largest, still part of their birthplace, remain unfinished in the tuff of the volcano wall. I can still recall the feeling of excitement when approaching the crater, seeing the heads standing half-buried around the outer rim. Then as I climbed around, discarded hand axes beneath my feet, observing the different stages of progress, I could envision how the carving was done.

During the day the sky was continuously alive, alternating from bright sunlight to rapidly moving dense white cumulus clouds - beautiful, but not very accommodating to photography.

On the last day a melancholy came over me as I watched the sun set over the island, standing at the other side barren horizon. It faded away to a silhouette, disappeared, then illuminated by a full moon it reemerged even more haunting. I was immersed in a feeling of timelessness and solitude as I realized that I was seeing something as it was hundreds of years ago. I hoped my photos were good - soon that would be all I had.

- Suzanne Williams
moai. The moai came from the quarry of Rano Raraku, which contains over two hundred and fifty statues in different stages of completion. The statues were carved horizontally with stone adzes. The sculptors had to carve around the statue, leaving the back of the moai attached to the ground, somewhat as a keel. That “keel” was then carved off, and the statue was extracted from its hole with great care. The statues then had to be moved many miles away, and different hypotheses exist concerning the method used. One men-

ations using two wooden rods tied to the top, in the shape of an upside-down V, with the statue tied under it. By pulling the V frame, the statue would advance. Another theory contends that two teams of people pulled the statues from two different angles at two different times (much like moving a refrigerator). Yet another method may have involved putting the statue on a wood sledge and gliding it down the hill. The moai, as representations of the people’s ancestors, were then moved to some sort of altar, named ahu, and erected with levers and stones. Some statues had a topknot of red scoria (pukao) and their eyes were “opened” – carved from white coral with obsidian for the pupils.

The statues were still being moved when the work mysteriously stopped, and the statues remained on the slopes of Rano Raraku, covered with debris and stone chips from the quarry. The period of statue carving extended from about 1000 AD to 1500 AD. The time from 1500 to 1722 is referred to as the “decadent period”, when statues were toppled from the ahu and the Birdman Cult replaced worship of the ancestors and the power of the chiefs. Overpopulation led to deforestation, tribal warfare and cannibalism.

What many consider the real mystery of Easter Island is the matter of the Rongo Rongo tablets. Only 26 still exist in museums around the world, due to their destruction by missionaries. The Rongo Rongo tablets are wooden boards, covered with small symbols similar to hieroglyphics, that have never been understood by modern science. In order to read or chant a line, the tablet has to be shifted upside-down for the next line, and so forth. It is believed

(Continued on Inside Back Cover)
Two New NSA Directors

The directors of the National Stereoscopic Association have just elected two new members to the board. One of the positions is to fill the vacancy left by the death of Lou Smaus; another slot was created to permit the addition of more talent concerned with various aspects of current stereo.

Dr. Andy Griscom has been collecting and studying stereoviews for 40 years. His emphasis is on New Hampshire and B.W. Kilburn, although he ranges world-wide in his interests. He is currently working on listings of views of various stereographers, and NSA's index of stereo makers. Many will remember him as one of the organizers of the NSA meeting in San Jose, CA.

He lives in Palo Alto, CA, and is a research geophysicist with the U.S. Geological Survey in Menlo Park, CA.

Mr. David Hutchison started with a boyhood interest in View-Master and 3-D comics, and began serious stereo photography in the 1970s. He participates in the folios of the Stereoscopic Society and PSA's Stereo Division slide competitions. He lives in New York City, and is Science Editor for Starlog Magazine. In addition to conventional and stereo photography, he is involved in computer stereographics and holography. He is the author of Fantastic 3-D (1982) one of the best books on stereo photography, comics and films.

These two, each outstanding in his own field, will bring a good balance and fresh outlook to the board of directors. T.K. Treadwell will continue as interim chairman of the board until a permanent one is selected at the NSA meeting in San Antonio this summer.

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The stage is set at the Montana State Fair, Helena, Montana, September, 29, 1911. Cromwell Dixon, age 19, the youngest person to earn a pilots license, has contracted to fly a Curtis Biplane in a series of exhibition flights for a record setting crowd exceeding 12,000 people.

Dixon received his membership from the Aero Club of America in July and was awarded License #43. He is trained to fly by Curtis in just 3 days, which is a record.

Cromwell's ambition was always to fly; his first attempts at flight were at age 12. After attending the St. Louis Worlds Fair were he was inspired by air balloons, he convinced his mother to finance and help build a balloon powered by gear and pedals from an old bicycle, which he piloted at events around Ohio, Kentucky, and Indiana. Dixon also won several prizes and medals in the International Balloon Meet of 1907.

Cromwell is on a tour from Binghamton, NY to Portland, OR with exhibitions in Nebraska, Kansas, North and South Dakota, Montana, and Washington. Plans are made for a first-ever transcontinental flight starting October 10, from Portland to New York.

Cromwell excites the crowd with his corkscrew dive, a spiral...
starting at 8,000 feet and then leveling off just short of landing. His salary from Curtis Exhibition Company is $2000 a week, a large sum in those times but there is more money to be made. Louis Hill, of the Great Northern Railway; John Ringling, Circus promoter; Lewis Penwell, farmer and fair president, and the Montana State Fair have offered a $10,000 purse for the first pilot who crosses the Continental Divide. The money is important as Cromwell supports his mother and sister and wants to supply them with every comfort.

Plans are made in advance for the flight from Helena to Blossburg, about 45 miles away, where young Cromwell, called "The Great Birdboy" will reach an altitude of 7,000 feet, land on a farm field, then if all goes well, return to Helena.

Friday, September 30, at 2:08 pm Cromwell starts the flight from the grandstands at the fairgrounds. The tiny aircraft climbs for 11 minutes then turns westward. Blossburg residents have built a large bonfire to mark the landing site. At 2:34 pm the aircraft lands. Upon being congratulated Dixon says: "Boys, I knew I could do it. Tell the folk in"
Helena I am here safely and will start back in a few minutes and will see them before 4 o'clock.”

Dixon walks to the telegraph station and sends a message to Curtis Exhibition Co. in New York; “Have crossed Continental Divide safely 2:34. Will start back in ten minutes . . . Cromwell Dixon.” Dixon delivers a letter from Governor Norris to the citizens of Blossburg then climbs into the plane. At 3:25 the aircraft leaves the field for the return to the waiting crowds at the fair, where he arrives at 3:55. “A greater ovation than ever before given anyone was accorded Dixon.” “The Governor publicly congratulated Dixon and declared that he was without peer in the realm of the air.” (Helena Independent, October 1, 1911)

On October 2, 1911, just 2 days after his famous flight, Dixon is killed. Shortly after takeoff from a grass field in Spokane, Washington, the plane crashes. It is believed that wind coming from a deep cut at a railroad track caused the plane, already at an angle, to plunge head first into the tracks. Citizens of Helena mourned his death. Spokane headlines the following day read, “Dixon falls to death – city of Helena in tears.” A collection is started for a suitable tablet to his memory.
The tablet originally installed at the state fair grounds was later moved to the Helena airport. Also at the airport is a mural of Cromwell Dixon landing west of the Continental Divide near Blossburg painted by Robert Morgan. In 1939 the U.S. Forest Service dedicated a picnic area on MacDonald Pass near Blossburg in Dixon’s honor.

Stereographs were taken by N.A. Forsyth who published a 15 card set of the Montana State Fair. Two variations are known, both in boxes marked “Montana Through the Stereoscope.” One set contains eight Dixon cards and seven cards of prize winning animals. The other set contains ten Dixon cards and five of animals. Forsyth marketed his own cards as well as acting as an agent for Underwood & Underwood, selling their products as well as selling photos to them from 1903 until Keystone purchased U & U. Sometime in the 1920s Forsyth became an agent for Keystone View Co. and sold both Keystone and his own products door to door, to schools and libraries in Nebraska, Wyoming, and Montana until he was 78 years old.

An excellent article on Forsyth can be found in Stereo World Vol. 10, No. 5, Nov./Dec. ’83.

Special thanks to Carol Frasier of the Montana Historical Society for the information contained in this article.

"Cromwell Dixon, Killed at Spokane, Oct. 2, 1911, Age 19."

“Crornwell Dixon, Killed at Spokane, Oct. 2, 1911, Age 19.”

STEREO WORLD January/February 1991
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IOWA VIEWS to buy, trade, or "borrow" (through xerox copies for research purposes). Especially want work by stereographers of/from St. Ansgar and Newton. Margaret Chancellor Caldwell, 1105 S. 13th Ave. W., Newton, IA 50208.

JOHN H. FOCH: Yellowstone series #38 "View Down the Ravine, on the Custer Field". Wanted for historical research. Would only need copy or rephotograph, but would most like to purchase or trade (have Foch #20, "U.S. Wagon Train" to offer). James Brust, 1907 Rapallo Place, San Pedro, CA 90732; (213) 832-7943 days, (213) 833-7747 evenings. WASHINGTON, D.C. Interested in purchasing Washington, D.C. materials - history, architecture, memorials, buildings, maps, stereo views, guidebooks, photos, post cards, memorabilia. DeWayne Cuthbertson, 2712 Vestavia Forest Terrace, Birmingham, AL 35216.

LONG ISLAND, NY collector seeking any and all stereo views marked Long Island. Also will buy quality LI real photo post cards. Material seldom refused. Joe Trapani, 611 Halg Street, Baldwin, NY 11510. HISTORICAL, stereo photographs, photographs, documents, medals, ephemera. Aviation, Civil War, firemen, law enforcement, postal, sports, transportation, city and towns, western. List $1.00. Macdonald Historic Collection, 1316 NE 113th, Portland, OR 97220, (503) 255-7256.

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NEW MEMBER desires old stereographs or glass negatives of anything pertaining to golf. Instruction sets, golf celebrities, golf courses, or golf course construction, equipment, etc. Send description and prices to: Bob Curzan, 7516 West Congress St., Milwaukee, WI 53218, (414) 465-8469.

PERSIAN GULF WAR. Out of 550,000 people, I hope somebody had a stereo camera. Interested in stereo prints, slides, negatives of historical value showing the war, liberation of Kuwait, etc. John Waldsmith, Box 191, Sycamore, IL 60178.

PERU. Interesting in stereo views and non-stereo prints/photos, early 1900s. Richard F. Archer, 4302 Mey erwood, Houston, TX 77096-3534.

SPINDLETOP OIL FIELD, Texas. Stereo views and non-stereo prints/photos, early 1900s. Richard F. Archer, 4302 Meyerwood, Houston, TX 77096-3534.

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

UNDERSWOOD & UNDERWOOD #9392 "Imported Americans", any stereo or other photos of Chinese in US Chinatowns, Ellis Island, Angel Island, immigrants boarding ships to the US, and steerage passengers. Sheeran, Box 520251, Miami, FL 33152.

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STEREO WORLD November/December 1990 39
April 13-14  (MA)
The Boston Show, Photographica '91. The 35th show sponsored by the Photograph Historical Society of New England. Armenian Cultural Center, 47 Nichols Ave., Watertown (Boston) MA. Contact David Berenson, 32 Colwell Ave., Brighton, MA 02135. Call 617-254-1565 afternoon, Eastern time.

April 13-14  (MI)
22nd Detroit Photorama USA, Dearborn Civic Center, Dearborn, MI. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2243.

April 14  (CA)

April 14  (NJ)
Second Sunday Camera Show, Community Fire Hall #1, Parish Dr., Wayne, NJ. Contact Second Sunday Camera Show, 25 Leary Ave., Bloomingdale, NJ 07403. Call 201-838-4301.

April 14  (Ont.)

April 20  (CA)

April 21  (CA)
Buena Park Camera Swap Meet, Sequoia Club, Buena Park, CA 7530 Orangetherope Ave. Call 714-786-8183.

April 21  (IL)
Chicagoland's Camera & Photo Show, Holiday Inn Rolling Meadows, IL. Write to Box 72695, Roselle, IL 60172. Call 708-894-2406.

April 27  (WA)

April 28  (CA)

April 28  (CA)
Pasadena Antique, Collectible & Usable Camera Show & Sale, Pasadena Elks Lodge, 400 W. Colorado Blvd., Pasadena, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405. Call 213-392-6777.

May 1-October 31  (MA)
Exhibit of Shaker portraiture and stereos including viewer. See Nov./Dec. '90, page 20.

May 4-5  (CA)
Western Photographic Collectors Assn. 23rd Annual Spring Show, Pasadena Center, 300 E. Green St., Pasadena CA. Contact WPICA, Box 4294, Whittier, CA 90607. Call 213-693-8421.

May 5  (NJ)
17th Annual Ocean County Camera Club Photo Flea Market, Lakewood High School, Lakewood, NJ. Contact Harold Kessler, Box 678, Lakewood, NJ 08701. Call 908-363-8099 after 6 p.m.

May 12  (CA)
8th Santa Monica Camera Show & Sale, Santa Monica Civic Auditorium, Santa Monica, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90406. Call 213-392-6777.

May 12  (NJ)
Second Sunday Camera Show (see Apr. 14).

May 19  (CA)
Buena Park Camera Swap Meet (see Apr. 21).

May 19  (IL)
Chicagoland's Camera & Photo Show (see Apr. 21).

June 1  (DC)

June 1-2  (CA)
San Francisco Bay Area Camera Show, Scottish Rite Auditorium, 1547 Lakeside Dr., Oakland, CA. Contact G. Lash, 231 Market Place Ste. 379, San Ramon, CA 94583. Call 415-828-1797.

June 2  (CA)
Pasadena Antique Collectible and Usable Camera Show & Sale (see Apr. 28).

June 2  (PA)
Delaware Valley Photographic & Collectors Association Spring Show, George Washington Motor Lodge, King of Prussia, PA. Contact DVPCA, Box 74, Delanco, NJ 08075.

June 8  (CA)
Oxnard Camera Show & Sale, Oxnard Community Center Complex, Oxnard, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405. Call 213-392-6777.

June 8-9  (TX)
8th Dallas Camera Show, Dallas Convention Center, Dallas, TX. Contact Donald Puckett, 1106 Graham Ave. #206, Dallas, TX 75215. Call 214-824-1581.
June 9  (CA)
Culver City Camera Show & Sale,
Veterans Memorial Auditorium,
Culver City, CA. Contact Anton
at Bargain Camera Shows, Box
5352, Santa Monica, CA 90405.
Call 213-392-6777.

June 9  (NJ)
Second Sunday Camera Show
(see Apr. 14).

June 16  (CA)
Buena Park Camera Swap Meet
(see Apr. 21).

June 21-23  (TX)
NSA NATIONAL CONVENTION
& TRADE FAIR, San Antonio,
Texas. Across the Alley From the
Alamo, Convention Hdq. at
Sheraton Gunter Hotel, 205 E.
Houston St. Contact Carroll Bell,
Box 9162, College Station, TX
77842. Call 409-693-7004 or
693-0488.

Easter Island

(Continued from page 32)

I ominous warning to another
island: Earth itself”.

Sources

Ethnology of Easter Island, Alfred
Metraux, Bishop Museum Press, Hon-
olulu, 1940; reprinted 1971. The most
complete book on Rapa Nui.
Aku Aku, Thor Heyerdahl; Rand
McNally & Co. 1958. An interesting
book that reads like a novel.
Easter Island, The Mystery Solved,
Thor Heyerdahl; Random House, 1989.
Coffeetable book with great photos
and a controversial point of view.
An Uncommon Guide to Easter Island,
Georgia Lee, PhD; International
Resources, 1990. PO Box 840 Arroyo
Grande, CA 93420. A great guide book
with lots of illustrations and excellent
text.

ARCHIVAL SLEEVES: clear 2.5 mi Polypropylene

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Russell Norton, PO Box 1070, New Haven, CT 06504-1070

Don't Miss
NSA 1991
San Antonio,
Texas
June 21–23
The 1991
NSA National
Convention and
Trade Fair
An all purpose British Railways locomotive as seen in Series 25 of the Vista Screen card sets. More on the little known British view company of the 1950s is found in "3-D Vista Screen Makes Everyone Look" by John Bradley on page 22.