A 3-D Film Festival

Chris J. Condon, president of Stereovision International, Inc., was described as "probably the leading authority on 3-D photography in the United States" by R.M. Hayes, in his book 3-D Movies. Thanks to Mr. Condon, Southern California was treated to a ten-week 3-D film festival this spring.

Stereovision completely took over the Vagabond Theatre near downtown Los Angeles, and outfitted it with the necessary equipment to present 3-D movies in the original interlocked twin projection system, as well as in the more recent single-projector, over and under image format. In the latter process, Stereovision designed the camera lenses and projection attachments for many of the 3-D films made in the 1970's and 1980's.

In addition, shorts and featurettes were included with some of the programs, including the two 3-Stooges comedies, "Spooks" and "Pardon My Backfire," and individual stories from the anthology film, "Tales From the Third Dimension." Special guests appeared at some of the programs, such as Kathryn Grayson ("Kiss Me Kate") and Marie Windsor ("Cat Women of the Moon").

Opening night was a gala affair, with searchlights sweeping the skies above the Vagabond, and marquee proclaiming "3-D Film Festival" and "House of Wax" in big letters. The auditorium was filled to near capacity for the 6:30 p.m. showing, and a long line stretched down the block for the 8:45 feature. The highlight for all was the appearance of "Mr. 3-D", Vincent Price, the star of 1953's "House of Wax." With him were director Andre deToth, and co-star Paul Picerni. Price patiently signed autographs in the lobby and spoke with an interviewer from "Entertainment Tonight." Then, before the theatre audience, he and deToth were presented with 3-D movie excellence awards by Chris Condon.

Two weeks later, the projection booth changed to Stereovision's single projection system for the world premiere of "Hyperspace," an Earl Owensby production. Billed as a spoof of outer space epics, the low budget comedy featured David Letterman regulars Chris Elliott, Paula Poundstone and Alan Marx. Despite the title, the entire story is earthbound, taking place in a small, southern town. The script is actually quite amusing, centering around the efforts of a confused Darth Vader-type character, along with his diminutive black-robed minions, attempting to locate the parties responsible for stealing their outer space transmissions. Of course, they immediately head for the local Aamco dealer, where they mistake an industrial vacuum cleaner for a droid.

The reviewer for the Los Angeles Times was mildly impressed with "Hyperspace," but his final observation was curious: "Unfortunately, there seems no reason whatsoever for the picture being presented in 3-D, since virtually no use is made of its unique resources." Apparently, he is among those who see 3-D's role in movies to be throwing everything at the viewer's face. I presume he found "Comin' At Ya!" (Continued on page 33)
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Front Cover:
Eisenhower, as Commander of NATO, on a visit to Istanbul with his Realist in early 1952. As well as observances at NSA 1990, the only known stereographer-president is remembered on the centennial of his birth in the feature “Stereographer Ike” by Laurance Wolfe. A major force behind both New Hampshire NSA Conventions, author Wolfe also provides a background to NSA 1990 with his “NSA Conventions Past & Present,” examining several aspects of the annual meetings. Photo courtesy Dwight D. Eisenhower Library.
Ike and Stereo - 1990

Dwight David Eisenhower was known by millions of people as “Ike.” In the early Ike days in Abilene, Ks., a stereoscope and views lay on a table in the Eisenhower home. Perhaps these vintage views and the viewer were enjoyed by the future President as he relaxed after school and his chores at the Belle Springs Creamery. Maybe they developed in young Ike an interest in stereography.

Only one 20th century view in the files of the Eisenhower Library in Abilene is documented as having been taken by the adult Ike. Views attributed to Ike by the Library may have been taken with Ike’s camera, but not necessarily by him.

The one documented view is all it takes for members of the National Stereoscopic Association to honor, in the Eisenhower Centennial year, “Ike the Stereographer,” the only President of the United States known to have taken a stereo view.

Lens caps are doffed to Dwight D. Eisenhower — a President who caught a small slice of the universe in stereo.

Convention/Trade Fair — The Whole Ball of Wax

Call it Convention and Trade Fair, call it Convention and Trade Show, call it Photo Show, or call it what you will — and it has been called all those things and more — NSA’s annual get-together is the largest assemblage of its kind for assorted 3-D-oriented individuals.

An expanding National Stereoscopic Association — up to the first of this year NSA had grown to a size never dreamed of by founders — has brought with its growth new studies of new frontiers in three-dimensional imagery. An increasingly large forum has been forged in what is this year called CONVENTION AND TRADE FAIR 1990.

The birth of NSA in 1974 was amidst a shower of stereo cards of Kilburn, Muybridge, Keystone, Underwood and Underwood, and the rest of the pack. Three-D’ers have seemingly put those views on the back burner and are toying more, in discussion groups and workshops, with the likes of anaglyphs, stereo video cameras, holograms, and other recent additions to the fascinating world of three-D.

Not that vintage views are being spurned. Given the variety of modern 3-D items, the specialty of vintage views out-pulls modern 3-D, by, perhaps 3 to 1, a ball park figure if there ever was one. The Stereo World survey which found modern vs. vintage to be 51 to 49% doesn’t acknowledge that the 51% is spread over the many differing items. The true vintage collector won’t bow yet to the challenge of the modern stereophile.

A description of early annual meetings by an old-timer: “a gold mine of stereo cards with a gang of pack rats descending upon it.” True, that is what the Trade Fair seemed like then. While this was not back far enough that views were being vended by the pound, there were no views commanding the hundreds of dollars each that some now bring.

Only sixteen years have elapsed since NSA was launched. Then the trade fair was the whole ball of wax. Now there are screenings of stereo slides, exhibits, banquets,
breakfasts, discussions, workshops, field trips, and delvings into the latest findings in the glorious world of 3-D.

NSA's Convention and Trade Fair first played in Canton before it went on the road. It is now a merry-go-round for collectors, open for the hungering collector once each year in different locations: Philadelphia; Canton, OH; Riverside, CA; Cincinnati, OH; St. Louis; Portland, OR; and other cities where, perhaps, the art of stereoscopy has been dormant for, lo, these many years.

The early days found NSA members enthusing over presentations such as Matt Isenberg's "twelve-chapter projection program of stereoscopic personalities, equipment and images they produced."

"It was the high point of the three-day event," according to SW's roving correspondent, John Waldsmith, speaking of this Canton show.

There were many other high points at Conventions along the way: San Jose, CA; where the first Convention in other than the East was held and the first which really attracted folks from here, there, and everywhere; the first New Hampshire do in 1984, brightened by the aura of the Kilburns and the White Mountains tour arranged by Dick Hamilton; the Riverside "show"
cannot be forgotten as it seemed to some like the singlemost cooperative venture along the sixteen-year path. Then there was last year's outstanding Portland meet which brought us closer to Viewmaster, perhaps, than we ever expected to get.

"How'm I doin'?" is a question often asked by a popular politician, that could easily be asked by NSA.

The answer: "NSA, you're doing swell!"

The Invited Exhibit

The Invited Exhibit, introduced to the annual meeting about ten years ago by Tex Treadwell, has attracted some stunning examples of stereography to the NSA arena. Perhaps the standout invited exhibit was that of Ron Lowden in 1987 at the King of Prussia NSA meeting.

Lowden chose the Crystal Palace Exhibition stereographs for display as his entry. But it wasn't as simple as that. The Exposition was the first congress of industry, science and art—a prelude to the many world expositions that have occurred in the nearly century and a half since.

Lowden displayed the nearly 300 stereographs produced from every angle of the Exposition in a four-foot high exhibit which needed a week to assemble and mount. Thirty-two feet in length, the display was a marvel of exactitude in documentation what with site, floor, and small area plans color-coded and pinpointed to show the photographer's location.

Convention 1990's invited exhibit consists of stereoscopic viewers from the Paul Wing Collection of over 200 instruments ranging from the earliest English and French models to the Keystone period in the United States. Special emphasis is given to a series illustrating the principal American stereoscope designs from the very earliest examples in the 1850s and into the 20th century. Maker, patent number, and other significant information accompany the viewers, where possible.

Teaming up with viewers from the Wing collection are some outstanding stereoscopic cameras from the past. Part of the collection of Eaton Lothrop, they have not been exhibited previously. Lothrop
Invited Exhibit Awards, 1982-1989

1982... Gordon D. Hoffman .................. San Jose, CA
1983... Russell Norton ...................... Washington, D.C.
1984... Lawrence Rochette .................. Manchester, NH
1985... Brandt Rowles ....................... St. Louis, MO
1986... Peter E. Palmquist .................. Riverside, CA
1987... Ronald D. Lowden, Jr. ................. Philadelphia, PA
1988... John Waldsmith ...................... Cincinnati, OH
1989... Reel 3-D Enterprises, View-Master Ideal, & John Lawler ...................... Portland, OR

is the well-known author of a number of books on photography, a lecturer of note, and a camera collector whose holdings cover a wide range of photographic instruments.

Annual Awards

NSA presents several different awards at its Annual Convention and Trade Fair. These are, in general, exhibit or service awards. The regular awards include:

1. Recognition of outstanding views, viewers, or other stereographica — a. As Invited Exhibit b. In competition usually by category.
2. NSA Fellow: Selected by Awards Committee on basis of distinguished scholarship and extraordinary knowledge of the field of stereoscopy. Nominations may be made but only one selected each year.
3. Meritorious Service Award — for contribution of time and effort to NSA. Nominations may be made. Awards Committee decides.
4. Edward Berkowitz Award: Article on vintage stereo in recent issue of SW. Awards Committee names.
5. Unnamed award for article on current stereo, Committee chooses.
6. Citation for generous financial support. Initiated by President of NSA. Given only in years President decides it is merited.

Convention and Trade Fair 1990 adds two ad hoc awards to convey special honor to special members and to provide a Convention benchmark of the first dedicated Convention (Dwight D. Eisenhower).

1. NSA Dwight David Eisenhower Memorial Award to outstanding NSA Stereographer. Convention Committee decides.
2. NSA Dwight David Eisenhower Award to Officers whose service is recognized as having been superior. Convention Committee decides.

NSA's Moveable Feast

Thurman F. (Jack) Naylor is NSA's 1990 banquet speaker. "Stereo photography... is the most beautiful and breathtaking form of photography."

That brief, carefully measured, and wholly earnest statement should be enough to make Jack Naylor the friend of every stereo view collector and shooter in the whole wide-eyed world of stereography.

For these words of Naylor were spoken on a walking-talking tour of a very special photographic museum. The spokesman-Naylor, is a businessman, world traveler, World War II Air Force pilot and possessor of a host of other skills, abilities and honors. A passionate devotion to photographica collecting (a major emphasis is on cameras of all ages), seals the qualifications of this Renaissance man.

That very special museum in Chestnut Hill just outside Boston, houses the Naylor Collection of Cameras and Images and is by no means light on stereo. Stereo items in the Naylor Museum include a Wheatstone viewer and memorabilia of Sir Charles Wheatstone, pioneer in stereo. Daguerreian and wet plate stereo cameras as well as important dry plate and roll film stereo cameras and stereo viewers grace the glassed cabinets along the walls of the spacious museum. Stereo and 3-D images from Daguerreotypes to modern lenticular prints round out the stereo part of the 23,000 item collection.

Jack Naylor is best known among the members of the Photographic Historical Society of New England (PHSNE — pronounced “Fizney”) as the member first on deck at the first-Sunday-of-the-month meeting in Framingham (MA). There one sees him setting up a montage of pictures memorializing "Doc" Edgerton, the

M.I.T. genius who first photographed at a halt that splashing drop of milk. Edgerton has just died. Naylor delivers a spontaneous, touching eulogy later on. Another cameo of Jack Naylor sees him arranging items for the auction for another meeting or bringing some elaborate and awesome looking camera before the members in "Show and Tell."

As editor of the New England Journal of Photographic History, Naylor exerts the kind of effort that might be expected of a full-time professional editor. When his fellow volunteers don't make copy deadlines, a complete issue of the JOURNAL is written and edited by Jack Naylor. Writing a column — COLLECTOR'S CORNER — for SHUTTERBUG MAGAZINE, is somehow sandwiched between all his other activities.

Smithsonian Magazine in October, 1987, devoted nine pages to Naylor and his unparalleled Collection. It is the Jack Naylor's of the photographic world who make NSA's annual banquet a moveable feast that strengthens our interest in stereography.
The NSA convention has been one of the highlights of my collecting and dealing activities each year since 1979. During most of that time I have been fortunate to be able to contribute to the success of these annual meetings through my involvement in the Spotlight Auction as well as via my tables in the trade fair.

An auction became a part of the NSA convention in 1977, and within two years had proven its popularity by developing into a 200-lot sale with a full-size illustrated catalog and some truly sensational offerings. Illustrating the cover of the third sale's catalog was a view from two nearly unique E. Anthony boxed sets. That's right, Anthony boxed sets. The cataloguer noted that "they are the only Anthony boxed sets known to exist." The Fulton Street Prayer Meeting and Home for the Friendless sets contained only twelve views each, but combined into one lot they were the sensation of that year's sale by attracting the startling sum of $1000. This was followed by a fifty view boxed set of President Truman's outing at the opening day game of the Washington Senators baseball team in 1945 was a steal at $450.

Two years later the NSA convention began its travels to other sites outside the cozy confines of the Canton, Ohio Art Institute, where the meetings had been held since NSA started holding its own convention. In subsequent years the quality and results of the auction varied according to which local volunteers assumed responsibility for gathering the lots, producing the catalog and arranging the sale. Of these the one which is most discussed is the 1983 DC sale which, starting late after an extended awards ceremony, finally finished disposing of its 316 lots well after midnight!

Despite the variety in its management, the NSA auction has always involved a fairly consistent format. Lots are solicited during the winter. Then copy is written describing each lot for inclusion in the catalog, and photos are made for illustrations. Next notices are put in Stereo World announcing the availability of the catalog. Catalogs are mailed about a month before the convention so mail and phone order bids can be taken from those unable to attend the public sale at the convention. Mail and phone bidding is closed a few days before the convention so the lots can be packed up and the manager can get them to the convention site. Here the public sale room is arranged. A preview is announced and held before the public sale to allow bidders an (Continued on page 11)

1980 sale were highlighted by the personal stereo collection of Keystone photographer Lynn Skeels, which included many extremely rare, if not unique Keystone views of famous people and unusual events of the 1930s and, yes, the 1940s and 50s. A fifty view boxed set of President Truman's outing at the opening day game of the Washington Senators baseball team in 1945 was a steal at $450. This was followed by a group of twenty views taken of action during the game, including one showing the immortal Ted Williams, which was also a bargain at $275. But despite the fact the Skeels views included many of the most important new views to come on the market in years, they were overshadowed by a Lincoln view at $1050, a carte-de-visite of Civil War photographer Alexander Gardner which drew $1200, and a twenty-five view boxed Wheeler Expedition set at $1000.

The success of the third sale became a foundation for the further growth and rise to prominence of the auction as one of the most significant parts of the NSA convention. The 327 lots offered in the...
Stereographer

Ike

by Laurance Wolfe
As a military man, he led the largest armed force in history to victory over an enemy who surrendered unconditionally. He served as President of his country and as President of one of the nation’s major Universities. His record in personal relations with world leaders was impeccable. His integrity was such that before he died—and even though he had spent a lifetime in the military—he warned his countrymen of the dangers of the military-industrial complex.

Despite his magnificent record of accomplishment, there is a small group which will revere Dwight Eisenhower for something other than his heralded exploits. These folks seem to focus on a little known side of Ike—his interest in stereo photography. Texas-born Kansan Dwight David Eisenhower is being paid, by the NSA, an especially affectionate tribute in New England this Eisenhower Centennial—Ike’s 100th birthday, 1990.

Eisenhower, who claimed Kansas as his home because the family moved there not long after he was born, indulged his hobby of stereography for almost a decade overlapping his White House years. Twenty years after his death, Ike, by certain folks, may be respected more for adeptness at stereo than for his international accomplishments. Today’s small coterie of 3-D photographers who revel in the avocation said to have caught Ike’s fancy, jump at the opportunity to honor a 3-D President.

The Eisenhower Presidential Library in Abilene, KS, is responsible for the administration of 1,154 35mm stereo transparencies, most of which they credit to Ike. The views cover a broad spectrum, from those of family, to stereogenic events.

Though Ike was not a collector of vintage stereographs, and by stereo standards Eisenhower Library views are not vintage, collectors enthusiastically seek to obtain Ike views for their collections. These are, of course, duplicates made from originals said to have been taken by Ike, or the few odd Eisenhower views made during the presidential years by Keystone View Company.

Eisenhower, amateur stereographer, was the tag that might have been hung on this man who had a few more powerful descrip-
At the beginning of 1990, a great number of happenings were being scheduled to mark Eisenhower Centennial. Ike's "native" Kansas is dotted with events scheduled throughout the year with John Eisenhower, Ike's son, or grandson David, nearly filling the calendar with appearances. Not the least of the observances of the centennial year is the Convention and Trade Fair of the National Stereoscopic Association. NSA has dedicated its annual event this year to "Ike — stereographer," despite the fact there is only one stereo view extant that has been documented as being a product of Ike and his camera.

The documented view is affirmed by none other than Eisenhower himself. In the book, "At Ease: Stories I Tell My Friends," Ike writes about a number of shots he took from a plane going from Greenland to Canada. He wrote: "at the time I was an enthusiastic amateur photographer and (I) snapped at least forty or fifty pictures . . . during the flight." The year was 1951. The author has a duplicate stereoscopic slide of one of these shots. The Library in Abilene has seven similar views titled "Sunrise Over Greenland."

Some three-dimensional camera users claim that Ike was one who helped bring the Stereo Realist camera to the forefront of photography in the forties and fifties.

The Stereo Realist, introduced circa 1947, achieved a great popularity in the decade that followed. If we are to believe the advertisements of the day, many well-known folks were taken with the camera and the idea of three-dimensional photography, even though 3-D was more than a century old. A host of celebrities — mostly of the Hollywood brand — armed themselves with Stereo Realists and went 3-D shooting.

The source of Ike's Realist (Serial # A 78695) is not known. Manufactured, as all Stereo Realists were, by the David White Company of Milwaukee, and part of an extensive marketing program, the cameras' routes to ownership were not traced as they would be in this later computerized day. The Realist's inventor, Seton Rochwite, speculates...
that Ike's close friend and consultant, Aksel Nielsen, may have given Eisenhower one that Rochwite had given Nielsen. One of the outstanding views in the Eisenhower Library collection is of Aksel Nielsen standing on a Colorado hilltop looking every inch the outdoorsman that he was.

Eisenhower was no new boy being introduced to photography when it is said he took up stereoscopy. For years he had been a photo buff, taking everything from snapshots to amateur movies. Or so it was believed. When son John joined Scouting, he was equipped with a Brownie camera of his own and was photographed on at least one picture junket when his father was stationed in the District of Columbia in the midst of the Great Depression.

Thumbing through the Eisenhower stereoscopic "file," one can see the wide range of interests that attracted Ike and his stereo camera. Grandchildren, fishing companions, statesmen, house guests, historic events, all were grist for the 35mm Realist.

Possibly the grandchildren take the spotlight as far as repeaters among the images are concerned. They appear in scenes at Gettysburg, at Columbia University, at Augusta, GA, and, in conformity with the peripatetic heritage that had already marked the Eisenhower family tree — in various parts of Europe.

David Eisenhower, now grown and author of a widely-hailed book chronicling the critical World War II years of which his grandfather was so much a part, was a perky little boy close to five years old who called his grandad "Ike." Ike's Realist caught him in 3-D in the yard at Gettysburg, being very little boyish, turning his back on the camera, shunning the very idea of being photographed. His sister, with their mother, make a pleasing 3-D tableau for Ike's camera. Other grandchild pictures find the children in their grandparents' Columbia University home, frolicking with their Grandmother Mamie. The grandchildren appear every once in a while in the images of family life put on film in stereo. In a couple of pictures, there is indication that the children have more than the usual interest in photography. They are recorded with cameras both professional and amateur.

The 1952 photo of Ike with his Realist featured on Stereo World's cover was also employed to promote the camera itself at a photo show. One panel of the sign reads "IKE LIKES HIS REALIST" while the other reads "REALIST LIKES IKE."

Axel Nielsen, Ike's fishing, hunting, and outdoor companion, looks over part of his ranch in Colorado.

Eisenhower grandchildren — not exactly posing.
The only stereo slide documented (by Ike himself) as absolutely without doubt the work of Eisenhower with his Realist. Titled “Sunrise Over Greenland,” it was made in January, 1951.

A hastily arranged stereo portrait, done as part of the 3-D coverage of Inauguration Day, January 20, 1953.

A sampling of family views includes Mamie’s father and mother with their Electric Car in Denver; oil portrait of Mamie by Ike; the Nielsen ranch, Frazier, Colorado, solo of Ike; the Triannon Palace hotel, summer of 1951, John Eisenhower, his son and daughters, and Mamie’s mother; Election night, Hotel Commodore, with Mamie’s mother, in-laws Gordon and Mike Moore, and friends.

A selective run-through of “friends and acquaintances” finds Aksel Nielsen at the Nielsen ranch; General Al Gruenther and Col. A.J.D. Biddle at the hotel Raphael, Paris; a West Point Reunion shot where Omar Bradley and Ike are easily identified; an air flight aboard the Columbine with Rose Woods, Mamie, Col. Carroll and Lt. Col. Schultz; Augusta National, Club House area; Ramey Field, Puerto Rico; Versailles, Gardens of Trianon; Fontainbleu Palace.

A group of fishermen, Ike among them, was the subject of a Colorado stereo view. In the middle of the group is Sgt. John Moaney, about whom Ike once wrote: “We were inseparable for . . . a quarter of a century. In my daily life, he is just about the irreplaceable man.”

Ike loved to tell the story about Sgt. Moaney and the presidential race. It seems that when the General knew he would be returning to the U.S. to cast his hat in the ring, he invited Sgt. Moaney to accompany him. Moaney quickly accepted despite Ike’s words of warning that neither the nomination nor the election would be sure things. “That’s all right, sir,” the good sergeant had replied. “We’ll find a way to get along if you don’t win.”

Typical SHAPE trip stereo views: Street scene, Fort Benning, Ga.; Keflavik, Iceland, airport, dinner with Minister Lawson and members of American legation; Udine, Italy, Carabiniers in dress uniforms.

Events, in Ike’s stereo album cover a wide range: Political campaign, Columbia, S.C.; Various inauguration shots, January 20, 1953; Prime Minister Winston Churchill at Bermuda Conference; Funeral, King George — nine views; Nomination Day, Chicago, 1952; Campaign, Stamford, Connecticut; Campaign, Lawrence, Massachusetts.

“Places and scenes”, in the Eisenhower file, cover much of France, Germany, Scotland with fairy tale castles, palaces, churches, and gardens predominating. Other European and American views fly under the “places and scenes” banner.

The Library in Abilene credits most of their stereo slide inventory to David Dwight Eisenhower. Many and few — all the way down to the one documented view — are credited by various sources to Ike.

The last word as to who authored the Eisenhower slides goes to an NSA member — Mel Lawson — not only because he is an NSA member but because he served in the military, most notably under Commander-in-Chief Dwight D. Eisenhower in the “Supreme Headquarters Allied Powers Europe” (SHAPE). This is a period when a number of the slides seem to have been taken. Admitting no “insider” information, Mel analyzed the catalog of the Eisenhower Library, and concluded that “those slides of most intimate and informal events are most likely to have been snapped by Ike in person. Those of formal occasions would have been most likely taken for Ike and under at least general guide-lines as to what Ike wanted.”

Mel Lawson’s guesstimate is that only 10% to 15% of the Library stereo views were taken by Ike himself. These percentages match those of other people who are less qualified to join in the guessing game than Col. (Ret.) Melvin Lawson.
Good evidence that Ike did more than just hold or point his Realist. Someone not actively taking pictures wouldn't have bothered advancing the film — as in this December, '53 photo from Augusta, GA.

Well, not quite the last word goes to Col. Mel.

Contradicting much that has been said about it, and reams of copy that have been written, stereophotography and his father do not appear together in memory, says John Eisenhower. He recalls that when he was a boy "there was a stereoptican (sic) in the (grandparents) house in Abilene ... it dated back to the turn of the century. But John Eisenhower does not remember his father as being attached to photography, let alone stereography.

Ike's son professed that he was a photo buff himself when in his teens. "Through high school in the Philippines (1936-39) I took four hundred photographs," he says. "I developed them myself and filed the negatives." As for his Dad: "To the best of my knowledge he never took pictures himself even though he commented on those I took." A last word from John: "We did have a stereo camera in Paris in 1951 and took some pretty fair pictures."

Maybe, just maybe, no one gets the last word, at least in this Centennial year. What the Library reports, what Col. Mel says, what John Eisenhower remembers — all could be accurate. There is not necessarily a conflict.

Members of the National Stereoscopic Association have dedicated this year's Convention to "Stereographer Ike." The one documented view qualifies Eisenhower as the only president who ever shot stereo views. And that's enough for the "Stereographer Ike" loyalists to install him as a patron saint of 3-D.

At the moment, it appears to be known that Ike's Stereo Realist took the views which have been mentioned here.

What isn't known is: Who pressed the shutter release?

THE SPOTLIGHT AUCTION

Opportunity to review the offerings. Bidders register to obtain a bidding number, which makes recordig bids easier for the clerks. The excitement builds as the sale is about to begin. Will I be able to buy what I want at the price I want to pay? What will the most desirable lots bring? Will new records be established (as last year, when a Great Eastern steamship view brought $650!)? And what will the "bargains" be? At an auction you never know, which makes it all the more exciting from start to finish.

And then the sale begins! Each lot is offered in numerical order just as organized in the catalog, and the number held by the winning bidder for each is held up or announced by the bidder so the clerk can record it on the proper invoice. When a bidder is finished bidding on items of interest, he or she approaches the registration desk, where the clerk totals the invoice and presents it to the buyer for payment. After paying the total, the lots are available for pickup. If the buyer prefers, invoicing and payment can be done by mail a week after the sale, and the lots mailed insured.

For the last three years the entire auction operation has been carried out by the same group, including myself as lot solicitor, cataloguer and auctioneer, and Dave and Robin Wheeler in charge of organizing and running the public sale and all the post-sale invoicing. We are proud of the quality and consistency we have worked to maintain in the auction event, and while we (well, I, anyway) have made a few mistakes, they have fortunately been relatively few and far between. We remain committed to creating a positive atmosphere for a high quality sale with the most worthwhile offerings possible.

As usual, all commissions from this year's sale go to the NSA, and many great lots are in place. At the end of June in Manchester, New Hampshire we will do our best to create a highlight of the NSA convention, the 14th Spotlight Auction of Fine Photographica.
Why is it that the old-timers keep harping on properly mounted stereoviews and correct window placement and all of the other marginal niceties? A new stereographer may make many pictures, enjoy them, and still be unclear on much of this. Why do errors in mounting or alignment bother some people more than others when a stereograph is viewed? Some of us become stereo athletes with a large tolerance to variation and error. Others never are able to free-view. Why is that? I feel that I can converge nearly anything, with or without a viewer, cross-eyed or free-view. But I had to learn that others cannot and that I must mount stereoviews accurately if I expect others to appreciate them without discomfort. Even then, some people have difficulty converging perfectly mounted views... why is that?

Society member Dr. Frederic P. Weitz of Huntington Valley, PA, is an optometrist with a major interest in the diagnosis and remediation of binocular vision problems. He is also an accomplished stereographer and especially qualified to shed some light on these recurring questions. Dr. Weitz reports:

"I consider myself fortunate to be involved with stereo vision on a professional day-to-day basis using stereoscopes, vectographs, and other assorted goodies. We measure stereopsis clinically to 20 seconds of arc although in lab conditions it can be measured to a much finer degree using vernier acuity. The reason we measure stereopsis is that it gives us an extremely fine indication of the degree of eye coordination. The finer the stereo acuity, the more efficient, coordinated, and symptom free a patient will be.

As to why certain people have trouble with one slide with a minimal vertical misalignment but not necessarily to others with larger deviations, it all boils down to ocular motility and not eye dominance.

Ocular motility refers to the latent physiologic position of the eyes (where they position relative to each other without any stimulus to fusion) and how efficiently they move towards each other when a fusion stimulus is present.

The physiological position of rest is called a heterophoria or phoria for short. If the eyes are vertically in line without a stimulus to fusion (identical shapes in front of each eye), then no vertical phoria is present. This is the ideal situation and vertically, most people fall into this category. If the right eye is aligned higher relative to the left without a fusion stimulus, this is called a right hyperphoria. This could just as easily be called a left hypophoria since it is a relative position. In both definitions the left eye is still lower than the right. If the left eye is latently higher than the right, it is called a left hyperphoria.

When a stimulus to fuse is present (homologous points on a stereograph), the hyper eye must move down or the hypo eye up, otherwise no fusion... no 3-D. This creates a muscular demand on the eye. The extent that it can move past this point is the muscular reserve. A symptom free patient either has no phoria or has a reserve generally equal to at least twice as large as the demand. This, of course, holds true in sports also. If one can do as a limit 30 pushups, then 10 should be quite easy since one could do 20
more beyond the demand in the form of a reserve. If asked to do 28 pushups it would be a real effort, pushing one to the limit, since only two would be left in reserve.

There may be a few among us in The Stereoscopic Society that may have vertical phorias, for example a right hyperphoria. This means that such a person is most comfortable with the right film chip mounted a bit higher than the left which would correspond to their eye alignment. The demand is less in this position since the right eye isn’t forced to come down as far to achieve fusion of homologous points. If however the left chip is higher by the same amount, it is instantly uncomfortable. In both cases one chip may be 0.5mm high with respect to the other, but in one case it is quite comfortable, in the other it is miserable.

Most people have no vertical misalignment, but some may have low reserves. This person will complain about a pulling of the eyes and possible headaches when the chips are just slightly out of vertical alignment. A person with high vertical reserves will never complain unless the chips are vertically off by a few millimeters. He or she is your ocular athlete.

The foregoing also applies horizontally. An outward latent deviation is called exophoria (the eye is under converged). An inward deviation is called esophoria (the eye is overconverged). Cosmetically none of these deviations is a problem because when there is fusion, the eyes must move in or outward respectively into alignment on the homologous points.

Horizontally, the eyes are rarely in perfect alignment, with exophoria being the norm. This corresponds to a much greater tolerance to horizontal rather than vertical mounting errors. The horizontal fusional reserves are also much larger to compensate for this.

The greater the exo, within limits, the easier it is to free-view stereographs because the eyes are naturally out and most comfortable there anyway. Most, if not all, freeviewers are exophoric.

Esos, like me, find it impossible to free-view clearly without extensive visual training. Esos, however, are naturals at cross fusion free-viewing and can often fuse the right view at great distances to the left of the left view. Many esos can do this also because convergence is a natural function. Divergence is much more difficult.

One more observation... although a vertical error may have caused viewing difficulties, it could have been an esophoric viewing chips with too much of a lateral separation or an exophoric viewing chips which are too close together.

I have tried to take a very complex subject and simplify it and to dispel certain false conceptions. I hope it clarified why correct mounting is so important and why certain people experience discomfort when viewing stereo. Also, if I was not too obscure in the above explanation, you may have realized that the phoria is actually the demand on fusion. The muscular reserve is more commonly called the fusional reserve. Both the phoria and the reserve are measured in prism diopters, a term which is familiar to those of you who collect visual training stereographs.

I thank Dr. Weitz for this enlightening analysis. Two things occur to me in conclusion. First is the continuing call for accurate mounting which does not assume that the viewer is a stereo athlete.

Second is that in spite of all of our best efforts some people will have difficulty in viewing our stereographs. That is the way it is. Let us be thankful for the gift that is ours.

Information on Stereoscopic Society membership can be obtained from the Corresponding Secretary, Jack E. Cavender, 1677 Dorsey Avenue, Suite C, East Point, GA 30344.

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**View-Master History Reprint Available**

The feature “Seven Billion Windows on the World — View-Master Then and Now” appeared in the now out-of-print Mar./Apr. ’84 issue of Stereo World. This 18 page illustrated history of the View-Master company has now been reprinted in a separate, updated version and is available for $3.00 including postage from the NSA Back Issue Service, Box 398, Sycamore, OH 44882.
Arizona Landmarks have always been popular subjects for local Arizona photographers and the major stereo publishers in the eastern United States. The most popular local subjects were Oak Creek Canyon's Red Rock Country, the Casa Grande ruins, Montezuma's Castle and Will, and Mission San Xavier del Bac. The most popular Arizona subjects that were published nationally by twentieth-century stereographers and by local eastern Arizona photographers and the major nineteenth-century stereographers were the Grand Canyon and the Hopi Mesas. A major factor in the local and national popularity was accessibility. Most of these areas became more accessible with the growth of settlements and the construction of the railroad. All of these areas functioned as tourist attractions to local residents and those travelling west to California. Stereographers helped to satisfy demand for views of these areas.

Views of these areas usually took up most of the local photographer's negative file because there was always a demand for them. Some areas such as Canyon de Chelley were less frequently stereographed due to its remoteness in the far northern part of the Territory. After O'Sullivan's stereographs during the Wheeler Survey about the only person who would have taken any stereographs of Canyon de Chelley was George Benjamin Wittick. The popularity of the previously mentioned subjects assured their publication as stereographs because they represent the West's natural wonders.

Montezuma's Well and Castle are located approximately fifty-five miles northeast of Prescott, twelve miles north of Camp Verde, and about forty miles south of Flagstaff in Northern Arizona. Montezuma's Well is located seven miles northeast of Montezuma's Castle. Both are located just off of I-17 at an altitude of about 4,000 feet.

The Hohokam Indians who settled the Verde Valley about 600 A.D. were the first at Montezuma's Well where their remains have been found. The Hohokam left the Verde Valley about 1070 and about 1125 the Sinagua Pueblo Indians moved into the Valley. Early construction of Montezuma's Castle was begun during the 1100s and reached its height of construction during the 1300s. Settlement was also increased simultaneously at Montezuma's Well. By 1400 the Sinagua abandoned Montezuma's Well and shortly after 1400 Montezuma's Castle and the entire Verde Valley were abandoned.

Montezuma's Castle was an apartment house built into the ledges of a natural cave. The building is four stories high with seventeen rooms plus two storerooms that make up a fifth story. Two trails led to the Castle. One up from nearby Beaver Creek and the other along the face of the cliff to the top of the first ledge. The walls of Montezuma's Castle are formed from rough chunks of limestone lain in mud mortar. The walls were constructed on the very edge of the ledges with enough earth fill behind to provide level floor space. Rooms average about 100 square feet of floor space.

Montezuma's Well is a limestone sinkhole in which a large spring flows. The rim of the Well is seventy feet above the surface of the water and the lake measures 400 feet across with a maximum depth of fifty-five feet. Archeological features include the remains of two pueblos on the rim of the Well and two burial grounds. There are also fossilized irrigation ditches along the north edge of the Well.

The first European to visit the area probably was Antonio de Espejo who travelled from the Hopi Indian villages in the northeast to the Verde River and down a stream identified as Beaver Creek. The United States acquired the Verde Valley as a result of the Mexican War and in 1865 established Fort Verde. During the 1860s army personnel visited Montezuma's Castle and in 1871 a U.S. Geological Survey party visited Montezuma's Well. Montezuma's Well was brought to the attention of the general public in Richard J. Hinton's Handbook to Arizona published in 1878. Dr. Edgar Alexander Mearns, an Ornithologist and Assistant Surgeon stationed at Camp Verde from 1884 to 1887, wrote the first detailed account of Montezuma's Castle titled "Ancient Dwellings of the Rio Verde Valley" and published in Popular

Flanders, Ruins at Montezuma Wells — yellow mount (Courtesy of the Sharlot Hall Museum, Prescott, AZ).

and Well
Science Monthly in October of 1890. Early in October of 1896 Montezuma's Castle was in danger of falling, so members of the Arizona Antiquarian Association sought aid from Congress and the Territorial Legislature. Dr. Miller of Prescott, the President of the Association, led the drive. They were unable to get funds, but a measure punishing vandalism was passed. The Association raised $150 in personal contributions which was used to insert long iron rods through the walls and anchor the foundation securely to the cliff, clean the rooms, and replace the ladders. This was all done within one year. On December 8, 1906 160 acres were set aside to preserve Montezuma's Castle as a National Monument by Presidential proclamation and on April 4, 1947 Montezuma's Well was acquired by the Federal Government through purchase from private owners. Photographic documentation began during the 1870s. Dudley P. Flanders of Los Angeles, who was in Prescott at the time, took some of the earliest stereographs during the

No. 77. Beaver Creek & Cave Dwellings. (Distant view of Montezuma's Castle) — Rothrock, orange/lavender mount — c. 1877 (Author's Collection).
Montezuma's Well. South Side. — Flanders & Penelon, orange/lavender mount — c. 1873-1874 (Author's Collection).

Spring of 1874. These views are on orange/lavender and yellow mounts. Montezuma's Castle was much more extensively photographed than Montezuma's Well. Most of the photographs taken of Montezuma's Well are not of the Well itself, but of the ruins nearby. Views of Montezuma's Castle were usually taken from points around Beaver Creek, then the photographer would take one of the trails to the Castle itself and take some stereographs. The three Prescott photographers: William Hamilton Williscraft, Daniel Francis Mitchell, and Erwin Baer all took stereographs of Montezuma's Castle and Montezuma's Well.

Stereographs of Montezuma's Castle and Montezuma's Well like views of Oak Creek Canyon's Red Rock Country were taken to satisfy a demand by local Prescott residents and the tourist trade. These would have had the same function as postcards. The finest stereographs of Montezuma's Well and Castle were taken by George H. Rothrock in 1877. Views are on orange/lavender mounts with manuscript captions and titled in gothic lettering "G.H. Rothrock's Arizona Scenery." They are numbered between 77 and 81.

Rothrock's biggest problem he encountered when he was photographing Montezuma's Castle was reflections in the water caused by the movement of beavers in Beaver Creek. During the early 1880s J.C. Burge of Flagstaff probably took some stereographs of Montezuma's Castle and Montezuma's Well, while on his visits to Oak Creek Canyon's Red Rock Country. Others who took photographs, but not stereographs were Edgar Alexander Mearns (1884-1887), Charles Fletcher Lummis (c. 1890), Roland Reed (c. 1890), and E.M. Jennings of Prescott (c. 1890).

Sources
Hume, Edgar Erskine, Ornithologists of the U.S. Army Medical Corps, volume 1, Baltimore: Johns Hopkins Press, 1942.
[Lummis, Charles Fletcher.] "The Rescue of Montezuma's Castle." Land of Sunshine 10 (1), (December 1898): 44.
3-D X-Rays of Teeth: A Practical Dental Office Procedure

by William C. Dolowy, MS, DVM
and John C. Lind, DDS

Equipment used to record stereoscopic intraoral radiographs. One radiograph is exposed with the x-ray head in position R; a second is exposed with the x-ray head in position L.

Stereopair of radiographs of isolated maxillary molar tooth with endodontic files in place. (If your dentist is willing to try this the next time you need an x-ray, and you don't mind the added exposure, be SURE to place the film in exactly the same position for each shot — and don't move your head! — Ed.)

Stereopair of radiographs from patient requiring endodontic therapy for mandibular molar tooth.
Stereoscopic dental radiography has valuable potential for evaluating the configuration of the root canals in endodontic therapy, in the treatment planning for dental implants, and in the evaluation of the periodontal support of teeth.

Recording of the pair of radiographic images is carried out by means of standard dental x-ray film and film holders, with an unmodified dental x-ray generator. Empirical studies with the use of extracted teeth yielded the best stereoscopic results with an angulation shift between exposures of 6 degrees.

**Stereoscopic Evaluation of Specimens**

To better obtain perspective of biological objects, it has previously been shown that skull and tooth radiographs taken from two directions, five to six degrees apart, appear stereoscopic when studied in a 3-D viewer, by 3-D projection on a screen, or by free viewing. The ability to obtain perspective information, especially concerning which part of the object is closer to or farther from the eye of the viewer, is greatly enhanced using the technique both for slides and radiographs of specimens.

Reproduced with permission from the Sept. '89 Oral Surgery, Oral Medicine, Oral Pathology Journal, page 367, and a pending article.
In the mid 1950’s, 3-D movies were the craze. Everywhere people donned those “funny little glasses” and viewed the wonders of the big screen in 3-D.

Starting with the Thanksgiving 1952 release of *Bwana Devil* and continuing for the next two years, theatres all over the country couldn’t wait to receive their next 3-D release.

To help promote upcoming features, as well as the general concept of 3-D, View-Master made arrangements with several of the large movie studios producing 3-D movies on a regular basis to put a series of specially constructed View-Master viewers directly into theater lobbies. These viewers had special View-Master reels previewing upcoming 3-D movies. This meant that studios were not only able to advertise the movie but to actually show scenes from it to the public in 3-D.

The View-Master film display cabinet was available through National Screen Service. The cabinet was specially constructed of fireproof steel, 4 feet long, 10 inches deep and contained three View-Master viewers. The cabinets cost $24.50 each and the movie preview reels were $1.85 for a set of three.

View-Master was wise enough to use the 3-D movie craze as a link-up with their regular distribution. The preview reels were not only used in movie theatres but were also available for preview to the 1,200 dealers across the country that sold VM at the time.

Unfortunately, the 3-D movie was short-lived since audiences seemed to prefer Cinemascope to the 3-D glasses. As the novelty wore off, the studios discontinued making movies in 3-D and, subsequently, View-Master quit producing the reels. Hence they are extremely rare.

View-Master was quite active making movie preview reels and thirty-one titles are known to exist (several titles were made up as test reels but never actually produced.) All the reel faces are marked with the movie name, the issuing studio and the words “not for sale.” This makes it easy to distinguish movie preview reels from any regular pro-

Vincent Price desperately tries to extinguish his flaming treasures in “House of Wax.” Warner Brothers, 1953, WarnerColor, Naturalvision. (See Bill Shepard’s 3-D Movie Column in this issue.) All movie pairs courtesy Reel 3-D Enterprises Collection.

duction reel which was actually sold.

Accompanying this article is a list of the reels that were known to have been produced. We know of two other movies that were not filmed in 3-D but had 3-D View-Master reels made up for them — The Robe and Beneath the 12-Mile Reef.

These were two of the earliest movies made in Cinemascope and we can only assume that View-Master intended to continue their movie reel promotion for films not released in 3-D. This process was obviously not successful since only one test reel of each is known to exist.


"Blitzkrieg" in the West:

The Fateful Spring of 1940

by Richard C. Ryder
Rarely in the two hundred year history of the United States has our very survival as a nation hung more precariously in the balance than during the late spring and summer of 1940. For this was the period when the so-called “Phoney War” turned nasty and Hitler came within a hair’s-breadth of winning the Second World War.

British Prime Minister Neville Chamberlain told a group of labor leaders on April 5, 1940, that Hitler had “missed the bus.” Coming from a man whose most memorable feature was his umbrella, who had earlier judged Hitler to be a sincere man of his word, and who had praised the shameful Munich Pact as “peace in our time,” this statement should not have inspired boundless confidence. And in fact, events were rapidly to prove once again just how wrong Chamberlain could be.

During that first winter of World War II, only the Poles suffered the full measure of Hitler’s wrath, while in England and France, which had after all declared war on Poland’s behalf, it was still pretty much business as usual. Not that there was much the British or French could have done to save the Poles. But they might at least have tried. The French, however, with the terrible carnage of the 1914-18 war still fresh in their minds, opted to sit it out within the steel-and-concrete sanctuary of the Maginot Line. There was little the English could do on their own, even had they been so inclined. So the BEF duly disembarked in France and waited. In the air, fear of reprisals confined Allied bombers to the highly ludicrous “truth raids” — leaflet drops over Germany. Only at sea, where Winston Churchill’s pugnacity and dynamism animated the Royal Navy, was there no “Phoney War,” and even here Churchill’s influence was not always beneficial.

Hitler had intended to unleash his onslaught against France as early as the previous November, but his senior generals had balked. Dazzled by the lightning-like destruction of Poland, they nonetheless cautioned that the victorious Wehrmacht badly needed refitting before embarking on another major campaign. Reluctantly, Hitler agreed. Throughout the long winter, while the Nazi war machine was being honed to peak efficiency, the Allies did nothing. Come spring, Hitler would be ready.

Less than 72 hours after Chamberlain’s optimistic forecast, Hitler struck. Again and again, the British had complained about Hitler’s use of Norwegian territorial waters to ensure safe transit of vital iron ore shipments to Germany. Finally, they had decided to thwart the illicit traffic by mining the waters in question. To forestall this, on April 9, 1940, German troops moved swiftly to occupy Denmark and Norway. A British force, hastily dispatched to aid the beleaguered Norwegians, quickly ran into trouble and had to be withdrawn.
But by then, Norway had become little more than a sideshow.
At dawn on May 10, 1940, German armies slashed across the frontiers of neutral Belgium and Holland. The Allied armies obligingly moved forward to meet them, unaware that the main German thrust was coming through the dense and supposedly impenetrable forest of the Ardennes to the south. The world was about to learn that the deadly “Blitzkrieg” combination of tanks and planes that had ripped apart Poland was no isolated phenomenon.

Within days, the Germans had punched a hole fifty miles wide in the center of the Allied lines, allowing Hitler’s armored columns to race virtually unopposed across Flanders toward the coast. Almost the entire British Expeditionary Force, together with an equivalent number of Belgian and French troops, were cut off with their backs to the sea, their only means of sustenance being the small French port of Dunkirk. Britain’s only field army was facing imminent and total annihilation.

There then occurred one of those seemingly inexplicable events which litter the pages of history. With victory in his grasp, Hitler suddenly ordered his armor to halt for reasons which to this day are unclear. The fact that the coast was poor tank country undoubtedly had something to do with it, as did Goring’s persistent plea that infantry and air power alone could finish the job. Then too, the panzers would need rest and repair before turning south against the French.

For whatever reason, Hitler let a golden opportunity slip away. During the nine days of Dunkirk, the Royal Navy, ably assisted by hundreds of small private craft, plucked more than 300,000 men from the harbor and unprotected beaches and, in the face of relentless air attacks, carried them safely to England. Britain’s army had been saved to fight again another day — but not just yet, for all its equipment and heavy weapons had of necessity been abandoned in the retreat.

Nevertheless, Dunkirk was a remarkable achievement, made possible only by Hitler’s misstep and superb weather conditions in the Channel. But, as Winston Churchill was forced to remind his countrymen, “Wars are not won by evacuations.”

For the French, there could be no salvation. This time there would be no eleventh-hour deliverance and, on June 14th, German troops marched into an undefended Paris. The great prize that had eluded the Kaiser’s armies for four entire years in World War I was Hitler’s after a campaign of just five weeks.

England’s turn would be next. But it was an England that was subtly changed. For on May 10th, as Hitler’s legions had begun their
attack on the Low Countries, the British people had finally replaced the vacillating Chamberlain as Prime Minister with the one man whose bulldog tenacity and brilliant oratory made him more than a match for Hitler — Winston Churchill. As he took office, Churchill had offered his countrymen nothing but 'blood, toil, tears, and sweat'; it would take them a while to realize just how accurate that promise would be. What Churchill would call 'their finest hour' was about to begin.

Hitler has often been criticized for failing to invade England in the immediate aftermath of Dunkirk. That he could successfully have deployed a couple of paratroop divisions in southeastern England is beyond question. Whether he could have followed this up with a full-scale seaborne assault in the face of determined opposition from the Royal Navy and Royal Air Force is more problematical. And to do so before the final defeat of France would have meant staking all on a single throw of the dice.

Besides which, there should have been no need. With Hitler in complete control of the continent, he fully expected the British to accept a compromise peace, which was really the only sane course open to them. What Hitler could not then envision was that the British had no intention of behaving in a sane and reasonable manner.

Planning for the invasion of England — 'Operation Sea Lion' — now began in earnest. While the Germans began somewhat belatedly to assemble the requisite landing craft, the first step would be to seize control of the air over southeastern England and the Channel, a task eagerly embraced by Goring's Luftwaffe. But Britain's Royal Air Force had a number of hidden advantages that helped offset the devastating numerical superiority enjoyed by the Germans. For one thing, British pilots who survived being shot down were soon back in the air, while Luftwaffe aircrews went straight into the prison camp. Furthermore, radar and ground observers could provide advance warning of exactly when, where, and in what strength the invaders were coming, thus allowing the RAF to make the most efficient use of its all-too-limited resources.

Nevertheless, it was a close-run thing. Throughout the long summer months, the deadly contrails criss-crossed the skies over southern England. And Hitler was winning. While Luftwaffe bombers pounded the Channel ports and smashed RAF airfields, the English faced an alarming and growing shortage of
"Mit Schlauchbooten über den Rhein," No. 52. Such assault boats were widely used in the invasion of Holland and Belgium, although here the key element was the skillful deployment of paratroops. P.: Huschke.

"Im evakuierten Frankreich brüllten die tagelang nicht gemolkenen Kühe vor Schmerzen. Auch hier half der deutsche Soldat," No. 64. The human side of war: German soldiers milk a captured French cow. P.: Huschke.

"Verpflegungsausgabe: 3 Eier je Mann." No. 65. German troops prepare to enjoy a meal of eggs and cheese; the stereographs document many aspects of life in the German Army. P.: Bauer.

pilots. And then a Luftwaffe flight got lost and strayed over London.

German air attacks on the British capital were expressly forbidden without the Fuehrer's personal authorization. In jettisoning their bomb loads before turning for home, these few errant fliers changed the course of history. The next night, the RAF in response raided Berlin. Stung to fury, Hitler ordered the Luftwaffe to go all out to destroy the British capital. It was his biggest mistake. London suffered dreadfully in "the Blitz," but the battered RAF won precious time to recover. And now at last, the terrible wastage of planes and crews began to tell against the Luftwaffe.

There was no great climax. The battle just withered away. And when it had, England remained, isolated and alone, but defiant. For a second time, Hitler had allowed a priceless opportunity to slip away.

"Operation Sea Lion" was postponed — then abandoned as Hitler turned his gaze elsewhere. The non-aggression pact so cynically concluded with Stalin in August of 1939 would not last forever. Soon, the Soviets would need attending to.

But for the German Army, back in those first euphoric days after the fall of France, all such doubts and disillusionments had seemed far away. Everywhere the "Master Race" stood triumphant. This had been the situation when the well-known stereo firm of Raumbild-Verlag issued Der Kampf im Westen (The Struggle in the West), an 80-page history of the campaign in France and Flanders, with a viewer and one hundred 130x60mm stereographs pocketed in the front and back covers of the book in the typical R-V format.

Subtitled Die Soldaten des Fuhrers im Felde — II. Band (The Fuehrer's Soldiers in the Field — Part 2), the book was intended as a companion volume to the earlier Raumbild work on the campaign in Poland. In fact, the two volumes shared a common authorship indicative of the duality of authority in Nazi Germany: Hasso von Wedel, a staff officer with the OKW or German Army High Command, and Henrich Hansen, a high ranking functionary with the Nazi Party press organization.

While the text itself may not be great literature, neither is it particularly virulent Nazi propaganda. Rather it is the sort of patriotic prose common to most countries in wartime, extolling the soldierly virtues and meant to reassure the folks at home that their sons are fighting bravely and triumphantly in defense of a noble cause. (For similar sentiments in an American context, one only has to watch any one of a half dozen or so John Wayne films!)

Admittedly, portraying the Nazi cause as a virtuous one may require a bit more imagination than usual, but then the German people were always told to seek Hitler with their hearts — not their minds. That the
text was meant to rally Home Front support is perhaps best illustrated in the book’s concluding paragraph:

The war with France might be over but the confrontation with England was not. The German soldiers, which had first carried their victorious banners through France, had only this one last opponent to overcome. This they would do wherever they met him. Out of their heroic deeds would grow a new Europe; from their mission would grow the true Greater Germany. No one in the world, neither friend nor foe, shall find such heroism in the pages of history as that of the German soldier. The devotion, steadfastness, and leadership of the front-line soldiers will shine forth as beacons throughout history.

But if this sort of visceral pep-talk can be downright cloying, there is in the stereographs a freshness and immediacy that captures the imagination and transports us back to that desperate time. They remind us too of something that in wartime is all too easily forgotten: that no matter how perverted his cause, the enemy is just another human being — subject to the same discomforts and fears as ourselves, and capable of the same heroism and self-sacrifice.

The stereographs were produced by an even dozen official OKW photographers, although the great majority were the work of only three men, identified merely as Jäger (40%), Weber (20%), and Dr. Wehlau (10%). These photographers appear to have been attached to individual units and it is often possible to match a particular photographer with his assignment. Dr. Wehlau, for example, covered the occupation of the Dutch and Belgian ports, while Jäger was present at both Dunkirk and the final French surrender at Compiègne on June 21.

The stereographs fall into two broad categories. One shows the activities of the various branches of the German ground forces (infantry, panzers, engineers, artillery, anti-aircraft, anti-tank, mortar, and machine-gun units, plus medical, communications, and commissary troops). Many of this type of view appear to have been taken during the “Phoney War” of the previous winter, as recurring images of leafless trees and snow clearly indicate. Such views are confined almost exclusively to Army activities (both the Luftwaffe and Kriegsmarine receiving separate treatment in Raumbild-Verlag volumes of their own).

The technical quality of the stereography is quite good, often superbly composed with plenty of three-dimensional detail to heighten interest — although there is an unfortunate “hyper” distortion in a few extreme close-ups.

The second general category of views is those which show the campaign itself and these are less satisfactory given the often spectacular results obtained by other forms of World War II photography. Although there is plenty of wreckage in evidence, no bodies or
This seems to have been the result of a conscious effort to render the war more antiseptic by playing down any disagreeable aspects of combat for the home audience. There is a distinctly racial element in the views as well — two views of French prisoners are clearly chosen to suggest the "decadent" influence of democracy as well as racial "pollution" attributable to the presence of North African levies. Other views are chosen to belittle the British forces for "abandoning" their allies, while the German soldier is everywhere depicted as the triumphant expression of Aryan supremacy.

One disappointing aspect of the set is the relative absence of identified personalities. Among the least satisfactory of the views in the set is the last, which shows Hitler and Goring emerging from the railway carriage at Compiegne after the French surrender ceremony: it is poorly composed and so distant that the two principal figures are barely recognizable. The only other personality to make it into the final set in Gen. Georg von Küchler, whose Eighteenth Army occupied Paris. Two others, General Ernst Busch of the Sixteenth Army and Field Marshal Heinrich von Brauchitsch, Commander-in-Chief of the Army High Command, are included in the list of stereographs appended to the text, but their views have been deleted from the final set and replaced by two totally innocuous alternates. This is reminiscent of the removal of two views of Rudolf Hess from the "Anschluss" set and may have been prompted by similar considerations — von Brauchitsch was subsequently made a scapegoat for German failures in Russia.

There is only a single, rather undramatic view of German troops marching into Paris, an apparent oversight rendered perhaps more understandable given the issuance by Raumbild-Verlag of a separate volume (Die Weltausstellung in Paris) to mark the event. That work is accompanied by 100 views credited to Heinrich Hoffmann, Hitler's personal photographer and confidante.

The formal surrender ceremonies at Compiegne fare little better — although it is here that one comes upon the most surprising treasure of all. William L. Shirer, CBS correspondent in Berlin in the 1930s was at Compiegne that afternoon, and he was eavesdropping on the Fuehrer's moods — discreetly of course, through binoculars from fifty yards away. Hitler's face, Shirer wrote, is alive with scorn, anger, hate, revenge, triumph ... He swiftly snaps his hands on his hips, arches his shoulders, plants his feet wide apart. It is a magnificent gesture of defiance, of burning contempt for this place now and all that it has stood for in the twenty-two years since it witnessed the humbling of the German Empire. Hitler's revenge was complete. The French surrender took place in the same railway car located on the same spot where the Armistice was signed in November of 1918.

Shirer would go on to become a renowned, prize-winning historian of the rise — and fall — of Hitler's Third Reich. Among the half dozen views of the surrender ceremony is one (98) of the foreign press gathered outside and there in the foreground, his legs astride a bench, pecking away at the typewriter perched precariously before him, sits Shirer — previously unidentified, the central figure in a tableau of history in the making.

When Hitler's armies invaded the Soviet Union on June 22, 1941, exactly one year to the day after the French capitulation, England was no longer alone. As the Germans advanced ever deeper into the Russian heartland, they left behind them an enemy gaining daily in strength and confidence. Behind them too lay the United States, its long economic depression buried in increasing war production, at last rearming and edging ever closer to war. From America's factories and shipyards would come the weapons that would destroy the Nazi regime.

America's entry into the European War doomed Hitler. However long and bitter the road, of the final
outcome there could be no doubt. But what if Hitler had defeated England in 1940, as he came so close to doing?

With no need for Hitler to maintain strong garrisons in Western Europe or to divert key resources to the U-boat and North African campaigns and with the Mediterranean transformed into an Axis lake, it is hard to see how the Russians could have withstood the Nazi onslaught. Furthermore, they would have had to do so without the vital supply lifeline of the Murmansk Convoys and without even the prospect of a “Second Front” in the West to keep hope alive.

And what of the United States? With all of Europe from Ireland to the Urals in German hands, along with Africa and the oil fields of the Middle East, America alone could not have defeated Hitler. In fact, deprived of the desire to succor Britain — there was no such moral imperative to aid Stalin — the isolationists would have triumphed and America might never have entered the war at all. Even if she did so, without the vital springboard of the British Isles, there could have been no American invasion of Europe — ever.

Not that either Hitler or the Japanese would have invaded the United States. Geography and logistics militated strongly against that. But, with the security of the Panama Canal compromised by pro-German elements in Latin America and our foreign trade expunged, America’s strength would quickly have withered away. Even the hidden trump card of atomic weapons would have come too late to reverse the situation and the world would truly have entered that “abyss of a new Dark Age” so eloquently foreseen by Winston Churchill.

This then was what was at stake during that dark spring half a century ago, as the first grey-clad soldiers clambered along the heights west of Calais and gazed out across a glittering expanse of Channel to a faint line of chalk cliffs tantalizingly silhouetted against the horizon. For those German soldiers the world seemed bright with promise. We can be thankful it was a promise that history was not destined to keep.

More detailed background on the Raumbild-Verlag stereo books can be found in the feature on that German company in the Nov./Dec. ’85 Stereo World, as well as in Richard Ryder’s article “Anschluss!” in the May/June ’88 issue.
Random-Dot Stereograms

Creating a Psychological Phenomenon

by Paul S. Boyer, Professor of Geology, Fairleigh Dickinson University

Amateur stereographers are well aware of the precision necessary to produce good stereograms. A speck of dust on one of the pair, a smudge, or a misalignment, and the stereogram is unsatisfactory. It is no wonder that successful applied stereography had to await the invention of photography, and that drawing stereograms by hand is a daunting task. Stereographic paintings are almost beyond possibility (Valyus, 1966).

The computer age has changed this situation. Modern computers have graphic capabilities which make possible precision drafting and image-placement within tolerances far beyond the capability of human hands and human patience. Even table-top personal computers now routinely have the requisite abilities that put the drafting of stereograms within our reach. Some of the resulting work has appeared in Stereo World, although not always labeled as computer-drawn. A few years ago I wrote a detailed article describing computer stereography (Boyer, 1987), but things move quickly in the computer field, and today even more feats of stereography are easily possible.

In my daily work I use a small Macintosh computer (a Macintosh Plus, the simplest currently available model in the line). The Macintosh is renowned for its easily learned, intuitive user-interface and its excellent graphic capabilities.

Graphics software is abundant and of perplexing variety, but I have recently concentrated on SuperPaint 2.0 (Silicon Beach Software, San Diego).

A Word About Format

In my projects I have used the 6 x 13-cm stereogram format, the DIN 4531 standard (Deutscher Normenausschuss, 1971). This is a size favored by many stereographers for printed work (McKay, 1944; Boyer, 1985). The standard specifies a stereo pair of two 54-mm-square members with their frames separated 62 mm, that is, with a space of about 8 mm between the two members (Figure 1). I usually start work by drawing the DIN-standard frame on the computer screen.

Drawing the Stereogram

The procedure for making the stereogram is in principle quite simple. A picture is created in one window of the frame (by habit, the left member). Parts of the left picture are then copied and shifted horizontally to the right window. Of course, the key in making the result stereoscopic is to move the parts by slightly different displacements. This is possible with most good graphics programs, but it is especially easy with SuperPaint 2.0 because that program allows one to select even very irregularly shaped parts of the left image, in addition to selecting areas of square, rectangular, oval, circular, or polygonal shape. The selected part is copied and shifted by holding the option

Figure 1. Frame for stereography according the DIN 4531 standard (nominal 6 X 13 cm) Dimensions are given in Pixels (picture elements of “screen dots”) for the Macintosh computer. Shown here in reduced size.
and shift keys while dragging with the mouse. The degree of displacement is registered and displayed digitally on the screen: one simply selects "show coordinates" from the "Floating Windows" submenu under the "View" menu (Figure 2).

This simple capability opens for stereography possibilities limited only by imagination. I have been making puzzles, optical illusions, three-dimensional graphs, pictures of molecules, little topographic contour maps with contours in relief, and cartoons. In my geology classes, some of these stereograms are used to introduce students to stereoscopic aerial photographs. Always the most popular examples, however, are the random-dot stereograms.

**Random-Dot Stereograms**

The random-dot stereogram is a very inspiring demonstration of the sophistication and complexity of the information-processing which occurs in everyday human vision (Julesz, 1971). The viewer is presented with a pair of seemingly meaningless pictures showing no image-outlines, but only fields of randomly distributed dots. When the viewer looks at the pair stereoscopically, an image mysteriously appears. The first extensive studies of random-dot stereograms were accomplished by Bela Julesz and his colleagues on large and expensive computers, using professional programmers, at the Bell Telephone Laboratories in Murray Hill, New Jersey. Nowadays, any amateur experimenter can, in a few minutes, accomplish the same things on a Macintosh with no formal programming.

To make a random-dot stereogram, one must first get a bunch of random dots. There are several ways to do this. With SuperPaint 2.0, one can simply spray a light-gray pattern using the spray-can tool, then intentionally mess it up with the convenient tornado tool. From the resulting field of random dots a 54-mm (153-pixel) square is selected.

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**Figure 2.** Macintosh screen using SUPERPAINT 2.0 to construct a simple stereogram. Notice that the "size" box at the bottom of the screen shows the horizontal displacement (in pixels) of the selected area which has just been copied and moved from the left to the right window. In this case a circular area has been moved 165 pixels.

**Figure 3.** Random-dot pair before creating a stereogram. This should look flat when fused.
The next step is to select an area of the left member with one of the selection tools. For example, a circular area might be selected using the oval selection-tool with the shift key depressed. The selected area will appear on the screen with the "marching ants" pattern going around it. The mouse is moved so that the selection arrow is in the selected area, and (depressing the option and shift keys) the mouse is moved sideways to drag the selection horizontally into the right window. If the selection is to appear behind the stereo window, it should be displaced by more than 178 pixels (62 mm); if it is to project in front of the stereo window, it should be displaced less than that amount (but generally not less than 165 pixels). Several such selections and option-shift draggings can be done to make designs of complexity, but the best random-dot stereograms are generally rather simple (Figure 4).

As with all computer-drawn stereograms, it is most exciting, as well as most efficient, to view the stereogram on screen, while the shifting is taking place. Thus one can adjust the depth of each selected area according to taste.

For complex geometric patterns, I often make a construction right on top of the left window, in SuperPaint 2.0's Draw layer. For example, a star is much too difficult a shape to select free-hand. The star shape, however, may easily be derived from a pentagon constructed using the polygon tool of the Draw layer (Figure 5).

One then switches back to the Paint layer and uses the polygon selection-tool to trace the vertices of the desired star, and with an option-shift drag, the area is duplicated (with appropriate displacement) into the right window. The pattern in the Draw layer is then either erased, or merely hidden from view. In this way the stereogram Figure 6 was made. Figure 7 involved several selections, but I intend to give no hint as to what it is supposed to be, for the reader will wish to be certain that he is not just imagining all these shapes at my suggestion!

Conclusions
Making drawn stereograms, and even random-dot stereograms, is now rather simple, thanks to the...
personal computer. Only a rank technophobe could fail to be delighted by the wonders of this evolving technology. Even more amazing, though, is the instantaneous computing which is going on somewhere behind the eyeballs whenever one views a stereogram, or (for that matter) anything in our three-dimensional world. Random-dot stereograms are a further demonstration of the sophistication of our visual system, for they show that outlines are not even necessary in order for the brain to perceive shapes and differences in depth. Julesz coined the term "the cyclopean eye" to refer to the brain's ability to produce one information-packed image from paired views of differing parallax. In order to view the hidden shapes in a random-dot stereogram, the brain must scan and correlate tens of thousands of tiny points in a few seconds. Perhaps it is this intimidation which most impresses us when working with random-dot stereograms.

References


A 3-D FILM FESTIVAL

(Continued from Inside Front Cover)

Ya!" much more satisfying. Chris Condon said that he was using the film festival as a vehicle to "test the waters" for a possible permanent 3-D motion picture theatre in L.A. As of this date, that exciting possibility hasn't been determined. Whatever the result, the festival has been a grand event for moviegoers starved for high quality 3-D programs.

Vincent Price chats with an interviewer from TV's "Entertainment Tonight" in the Vagabond Theater lobby, April 6, 1990. (Stereo by David Starkman.)
Oak Creek Canyon’s Red Rock Country is located thirty-five miles south of Flagstaff in Northern Arizona and lies along the southern escarpment of the Colorado Plateau. It covers an area of five hundred square miles and is traversed by U.S. Highway 89A and State Highway 179. Oak Creek Canyon is located at an altitude of 4,000 feet and is bounded on the north and east by the Mogollon Rim, bounded on the south by the Verde Valley, and bounded on the west by Sycamore Canyon. The Canyon is the result of millions of years of volcanic activity and erosion that formed the elaborate and unusual shaped buttes and mesas. The rock formations probably most closely resemble those photographed at the Garden of the Gods in Colorado during the nineteenth century.

Little archaeological data exists for Oak Creek Canyon, but the prehistory is assumed to be similar to that of the Casa Grande ruins from excavations conducted in the vicinity. The first European to see Oak Creek Canyon was the Spanish explorer Antonio de Espejo, who saw it from a distance in May of 1583. In 1598, the explorer Marcos Farfan de los Godos also saw Red Rock Country from a distance. John Jim Thompson was the first permanent settler in 1876. In the early 1880s officers of Camp Verde had a camp named Camp Garden at Oak Creek. During the 1870s and 1880s most of the buttes and mesas were named. In 1899 a school was started in Oak Creek Canyon and on June 26, 1902 a post office was established in the village of Sedona. The wagon road through Oak Creek Canyon was not completed until 1914. This road went as far north as Flagstaff and was an improvement over the Schnebly Hill Road, completed in 1902. During the 1920s, Zane Grey filmed some of his movies in Red Rock Country. Starting in the 1880s, Oak Creek Canyon became a tourist attraction because of its beauty. Residents from the Verde Valley, Prescott, and Flagstaff frequently visited Red Rock Country during the nineteenth century creating a demand for photographs of the area.

Photographic documentation of Oak Creek consists for the most part of non-stereoscopic photographs. Stereographic coverage is confined to the 1870s and 1880s. William Hamilton Willis of Prescott stereographed Oak Creek Canyon in 1876 when he visited Camp Verde. Views are on standard size yellow mounts imprinted “ARIZONA VIEWS, W. H. Willis, Prescott, A.T.” George H. Rothrock might have stereographed Oak Creek Canyon in 1877 while on his way to Prescott. During the 1880s he did take some boudoir size photographs on white mounts and im-

Arizona Landmarks have always been popular subjects for local Arizona photographers and the major stereo publishers in the eastern United States. The most popular local subjects were Oak Creek Canyon’s Red Rock Country, the Casa Grande ruins, Montezuma’s Castle and Well, and Mission San Xavier del Bac. The most popular Arizona subjects that were published nationally by twentieth-century stereopublishers and by local eastern and major nineteenth-century stereopublishers were the Grand Canyon and the Hopi Mesas. A major factor in the local and national popularity was accessibility. Most of these areas became more accessible with the growth of settlements and the construction of the railroad. All of these areas functioned as tourist attractions to local residents and those travelling west to California. Stereographers helped to satisfy demand for views of these areas. Views of these areas usually took up most of the local photographer’s negative file because there was always a demand for them. Some areas such as Canyon de Chelley were less frequently stereographed due to its remoteness in the far northern part of the Territory. After O’Sullivan’s stereographs during the Wheeler Survey about the only person who would have taken any stereographs of Canyon de Chelley was George Benjamin Wittick. The popularity of the previously mentioned subjects assured their publication as stereographs because they represent the West’s natural wonders.
Williscraft, Prescott. Caves and ruins on Oak Creek — yellow mount — c. 1876-1877 (Courtesy of the Sharlot Hall Museum).

No. 27. Aztec Ruins at Oak Creek. East Side. Mitchell reprint, c. 1880 of earlier Williscraft negative, c. 1876-1877 — Orange/Pink mount (Courtesy of the Sharlot Hall Museum).

Red Rock Country
printed "G. H. ROTHROCK. PHOENIX, ARIZONA."

Daniel Francis Mitchell of Prescott stereographed Oak Creek's Red Rock Country during the 1880s and these views were published on standard size orange/lavender mounts imprinted in gothic letters "D. F. Mitchell, Prescott, A.T." Later on in the 1880s Daniel Francis Mitchell was accompanied by Erwin Baer on his excursions into Red Rock Country. On one of these expedi-

tions they photographed the soldiers at Camp Garden. Stereographs by Mitchell & Baer of Oak Creek are on buff mounts and have the "Mitchell & Baer" imprint on the back of the mount. The finest series of stereographs were taken by J. C. Burge of Flagstaff during the early to mid-1880s. These are on orange/lavender mounts and consist of views of various buttes and mesas.

Stereographic coverage of Red Rock Country consists for the most part of buttes and mesas and some panoramas. Most of these stereographs were taken by Prescott photographers who had easier access to the Canyon as opposed to Flagstaff photographers who had a more treacherous journey along the edge of the Mogollon Rim. Photographs of Oak Creek Canyon after 1890 are mainly cabinet, boudoir cabinet cards and postcards.
During the nineteenth century Red Rock Country was more accessible to Prescott photographers who travelled along a route that took them from Prescott to the Verde Valley and across the Black Hills Range and into the desert. Across this desert lay Oak Creek’s Red Rock Country. Along this route photographers would take stereographs of Stoneman’s Lake and Montezuma’s Castle and the ruins at Montezuma’s Well. Oak Creek Canyon was not accessible to Flagstaff until the early twentieth century. The route from Flagstaff to Oak Creek before 1900 consisted of trails that led around Oak Creek’s Red Rock Country.

SOURCES
Sedona Westerners. These Early Days . . . .

The First NSA View-Master Three Reel Packet

A Limited Edition Collector’s Item!

Reels A & B contain scenes from some of the programs presented at NSA PORTLAND 89, the 15th annual convention of the National Stereoscopic Association, Aug. 4-7, 1989, Portland, Oregon. Reel C is a collection of scenes from several View-Master “DR” and Plant Tour reels and is the only commemorative reel to be published as a token of the 50th anniversary celebration.

Packets are $6.00 including postage from NSA, Box 398, Sycamore, OH 44882.

FIRST ANNUAL FALL

Boston Antique Photo Show

“The #1 Antique Photo Image Show in the NE”

50 tables of stereoviews, CDVs, Daguerreotypes, photographs, etc.
No Cameras!

Sunday
7 October 1990
10 AM - 5 PM; Public Admission $4
57 Park Plaza Hotel Howard Johnson
Boston MA: 200 Stuart St. Park Sq.
Convention Halls “A & B”
Preview admission 8:30 AM $20
DC show: 14 October 1990
Managed by Russell Norton, PO Bx 1070,
New Haven, CT 06504 / (203) 562-7800

SEVENTH ANNUAL FALL

D.C. Antique Photo Show

“The #2 Antique Photo Image Show in the USA”

Over 55 tables of stereoviews, CDVs, Daguerreotypes, photographs, etc.
No Cameras!

Sunday
14 OCTOBER 1990
10 AM - 5 PM; Public Admission $5
Rosslyn Westpark Hotel, 1900 N. Ft. Myer Dr.
Arlington, VA: Rosslyn Ballroom
“At the Key Bridge opposite Georgetown”
Preview admission 8:30 AM $20
1991 shows: 24 March & 6 October
Managed by Russell Norton, PO Bx 1070,
New Haven, CT 06504 / (203) 562-7800
In a cooperative effort with the Red Wing View Company and Q-VU stereo print mounts, Grand Photo of St. Paul, MN is offering a service which provides correctly transposed “monolithic” print pairs from color negative rolls shot with any Realist format camera. The images are on 3½ x 6¼” paper, with a blank 2mm septum between them. A blank 5mm border is left at the top and bottom, and the images very nearly bleed to the outer edges of the paper.

A thin strip of the frame lines produced by the camera is visible near the septum in some cases, but the intent is that these print pairs will be inserted in Q-VU self-masking mounts as part of the nearest thing to a fool-proof stereo mounting system ever to appear. The Q-VU windows will hide the print edges and any frame lines, resulting in what those involved describe as a “Grand View.” Close-ups can be mounted in the Q-VU “X” mounts with their smaller windows. Minor adjustments can of course be made to the 3-D placement of the image by cutting the images apart and moving them to or from the center. In the samples seen, vertical alignment remains consistent and would need no attention.

For those who trim and mount their prints on regular stock, these monolithic pairs still provide the advantage of easy previewing, as well as eliminating the chance of right and left images being filed in different places during the sometimes long wait for mounting. Also eliminated, at least in the samples seen, is the likelihood of shifts in exposure or color between images. (Negatives from Nimslo/Nishika cameras are also said to be accepted for printing, but no samples were yet available as we went to press.)

With each roll of Realist format color negative (C-41) film, include $1.00 per view and $4.00 for developing and shipping. Information on ordering reprints will be returned with the prints and uncut negatives, along with stereo order forms from: Grand Photo, 1681 Grand Ave., St. Paul, MN 55105.

(Q-VU mounts are available from Q-VU, 817 E. 8th St., Holtville, CA 92250. See Newviews, Jan./Feb. ‘90 and July/Aug. ‘87.)

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.
3-D in Your Lunchbox

The availability of 3-D movies on video tape, via synchronizing devices and shuttering glasses, has reached the point where packaging has become an element in their promotion. The 3-D TV Corporation of San Rafael, CA now offers a "3-D Video Lunchbox" containing liquid crystal shuttering goggles, a stereo driver to synch goggles to the tape, a 3-D tape of your choice, DC adapter and cables. Selection of tapes is limited, but more are promised soon. (See their ad in the Nov./Dec. issue.)

The "Lunchbox" kit currently sells for $189.95 and the company has plans to make rental kits available through video stores. For more information, contact 3-D TV Corporation, Box 13059, San Rafael, CA 94913 (415-479-3516).

IMAX: No Cord, No Window, No Screen!

The technique used by IMAX for their new dome-screen 3-D system has become more evident with the unveiling in March of the "Solido" goggles worn to view the film "Echoes of the Sun" at Expo '90 in Osaka, Japan. A liquid crystal shuttering system with wireless synch to an alternating-frame projector allows wide angle viewing of color 3-D films on a screen "wrapped" around the audience to the sides and above. The changing angles involved make polarized projection impractical, which is why the only similar film, "We Are Born of Stars" is anaglyphic for dome-screen OMNIMAX projection.

Solido is claimed to be the first 3-D film system that truly moves the edges of the image to the limits of the normal field of vision — thus finally eliminating the "stereo window" along with any awareness of the existence of the screen itself. The 20 minute "Echoes of the Sun" uses both 3-D computer animation.
and live action to dramatize the process of photosynthesis and is presented at the fair's Fujitsu Pavilion. (See Stereo World, page 12, May/June '89.) To date, no installation of the Solido system is scheduled anywhere in North America. A more detailed report on Solido and other IMAX developments will appear in a future issue.

Sixty-eight years later, a novel 3-D film concept returns. Liquid crystal shuttering goggles for the IMAX wrap-around 3-D Solido system. Not since the mechanical-shutter Teleview system was exhibited in New York in 1922 has the eclipse method been used in a commercially presented film.

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### Atlas Comes With Two Viewers

A recently published medical text on electron microscope stereo images of the cell includes the familiar plastic lorgnette viewer for its side-by-side pairs, but also the Taylor Merchant folding stand-on-the-page viewer. According to a review by Stan White in Photographic Canadiana, the well printed pairs reveal new aspects of relationships among structures within the cell, and are as fascinating for the stereo enthusiast as for a biologist or medical student. The 65 pairs are on 70mm centers with well positioned windows allowing easy viewing.


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(714) 644-9500

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June 26, 27  (OH)
Ohio Camera Collector’s Society
Annual Camera Photoshow, Parke Hotel, 900 Morse Road, Columbus, OH. Contact John Durand, Box 282, Columbus, OH 43216. Call 614-885-3224.

June 29 - July 2  (NH)
NSA 1990 - THE NATIONAL CONVENTION RETURNS TO MANCHESTER, NH THIS YEAR WITH A UNIQUE THEME AND AN EXPERIENCED TEAM. HOLIDAY INN AT THE CENTER OF NEW HAMPSHIRE CONVENTION FACILITY, MANCHESTER. CONTACT DONATO BRACCO, 348 HAYWARD MILL ROAD, CONCORD, MA 01742. CALL 617-369-8347.

July 8  (NJ)
Second Sunday Camera Show,
Community Fire House #1, Parish Drive, Wayne, NJ. Contact Second Sunday Camera Show, 25 Leary Ave., Bloomington, NJ 07403. Call 201-838-4301.

July 8  (CA)
Pasadena Antique, Collectible, and Usable Camera Show & Sale, Pasadena Elks Lodge, 400 W. Colorado Blvd., Pasadena, CA. Contact Anton at Bargain Camera Trade Shows, Box 5352, Santa Monica, CA 90405. Call 213-396-9463.

July 8  (IL)
Chicagoan’s Camera and Photo Show, Holiday Inn, Rolling Meadows, IL. Contact Chicagoland, Box 37695, Roselle, IL 60172. Call 708-894-2406.

July 22  (CA)
Buena Park Camera Swap Meet,
Sequoia Club, 7520 Orangethorpe Ave., Buena Park, CA. Call 714-786-8183 or 786-6644.

August 5  (CA)
Hayward Camera Swap, Centennial Hall, 22292 Foothill Blvd., Hayward, CA. Contact G. Lash, 231 Market Place #379, San Ramon, CA 94583. Call 415-828-1797.

August 5  (CA)
Pasadena Show (see July 8).

August 12  (NJ)
Second Sunday Camera Show (see July 8).

August 12  (CA)
Buena Park Camera Swap Meet (see July 22).

August 12  (MI)
Metro Detroit Camera Show, Millwright’s Hall, 23401 Mound Rd., Warren, MI. Contact Sam Vinegar, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2243.

August 19  (IL)
Chicagoland’s Camera & Photo Show (see July 22).

August 19  (CA)
Santa Barbara Camera Show & Sale, Earl Warren Showgrounds, Santa Barbara, CA. Contact Bill Bagnall, 714-786-8183.

August 19  (PA)
Pennsylvania Photographic Historical Society Foto Flea Market, Holiday Inn RIDC Park, Pittsburgh, PA. Contact PPHS, Box 862, Beaver Falls, PA 15010. Call Jane Tarr, 412-828-9285 or 828-9487.

August 25, 26  (CA)
Summer Photo Fair - San Jose, Santa Clara Co. Fairgrounds, San Jose, CA. Contact Photo Fair, Box 32932, San Jose, CA 95152. Call Dave Cox, 408-251-9197.

August 27 - September 1  (TN)
National Convention, Photographic Society of America, Nashville, Tennessee. Contact Richard Frieders, 1305 Foxglove Drive, Batavia, IL 60510.

September 22  (CA)
1990 Monterey/Carmel Camera Show & Sale, Carmel Mission Inn, 3665 Rio Road, Carmel, CA. Contact G. Lash, 231 Market Place #379, San Ramon, CA 94583. Call 415-828-1797.

September 22, 23  (TX)
28th Semi-Annual Houston Camera Show & Sale, Holiday Inn, Hobby Airport, Houston, TX. Contact Leonard Hart, c/o The Heights Gallery, 1438 Herkimer, Houston, TX 77008. Call 713-868-9606.

COLUMBUS OHIO PAPER FAIR
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Books, photos, newspapers, postcards, stereoviews, sports cards, comics, etc.
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A German artillery observer uses a stereoscopic rangefinder to guide heavy shell-fire onto an enemy strongpoint. An interesting application of stereoscopy to military operations from the feature "'Blitzkrieg' in the West: The Fateful Spring of 1940" by Richard C. Ryder on page 22.