THE MAGAZINE OF 3-DIMENSIONAL IMAGING, PAST & PRESENT

January/February 1995
Volume 21, Number 6

STEREOWORLD

A Publication of NATIONAL STEREOSCOPIC ASSOCIATION, INC.

Underwood's 3-D Magazine • VR From Doom to Garage
With the deadline now passed for our “Wheels” assignment, we will present selections from the final entries in that category while we wait for the response to the next assignment.

New Assignment: “Unusual”

To say this covers a wide range of potential subjects would be an understatement, to say the least. What we would like to see are the stereographs you consider the most unusual you have ever taken—in whatever sense of the word you may regard the images. Abstract light patterns or computer generated images could certainly be among these, but please keep in mind that actual stereographs of “reality” can be just as unusual, given the right circumstances, as any constructed image.

It can be the subject itself that’s unusual or something about the stereography or the photographic processes involved. The unusual aspect can be a spectacular event, a bizarre subject, an unlikely circumstance, or a humorous situation. An initial guide may be to pick images that not you or anyone else is ever likely to be able to record again. We’re taking a chance on this wide-open category that could bring in nearly anything and everything, so if you’re uncertain whether or not a particular image fits, send it in anyway and share the confusion!

Deadline for the “Unusual” assignment is October 25, 1995.

The Rules:

As space allows (and depending on the response) judges will select for publication in each issue at least two of the best views submitted by press time. Rather than tag images as first, second or third place winners, the idea will be to present as many good stereographs as possible from among those submitted.

Prizes are limited to the worldwide fame and glory resulting from the publication of your work. Anyone and any image in any print or slide format is eligible. (Keep in mind that images will be reproduced in black and white.) Include all relevant caption material and technical data as well as your name and address. Each entrant may submit up to 6 images per assignment.

Any stereographer, amateur or professional, is eligible. Stereos which have won Stereoscopic Society or PSA competitions are equally eligible, but please try to send views made within the past eight years. All views will be returned within 6 to 12 weeks, but Stereo World and the NSA assume no responsibility for the safety of photographs. Please include return postage with entries. Submission of an image constitutes permission for its one-use reproduction in Stereo World. All other rights are retained by the photographer.

Send all entries directly to: ASSIGNMENT 3-D, 5610 SE 71st, Portland, OR 97206.

"Union Pacific Challenger Wheels" by Robert J. Vaughan of Lawrence, KS was taken in September, 1992 in Topeka during "Railroad Days" at Forbes AFB. Using TMY 400 b&w film and a Busch Verascope 40, Mr. Vaughan shot the Challenger 4-6-6-4 from several positions as well as in motion. It's the world's largest operating steam locomotive, engine and tender weighing over a million pounds on 34 wheels.
The Stereoscopic Photograph ................................................. 4
"The Only Magazine in the World in the Stereoscopic Field"
by John Dennis

Virtual Reality ............................................................ 12
From Doom to Mars to Your Garage
by Ken Clark

StereoScript ............................................................... 20
New Column Presents Writings About Stereo

Underwater Stereo with Class .............................................. 21
Review by John Dennis

City Honors a Long Lost Steregrapher ................................. 23
by Stan White with material from Markus R. Boost

Supercharging the Steroematic 500 ............................... 26
by Chris Perry

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

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

The Unknowns Can You Identify the Subjects of These Views?, by Neal Bullington .......... 16

NewViews Current Information on Stereo Today, by David Stankman & John Dennis .... 18

View-Master Information on the Reel World, by Wolfgang & Mary Ann Sell ........ 22

The Society News from the Stereoscopic Society of America, by Norman B. Patterson .... 24

Calendar A Listing of Coming Events .................................... 28

Classified Buy, Sell, or Trade It Here .................................. 30

On the Cover
For the first few years of the 20th century you could subscribe to a magazine called The Stereoscopic Photograph and enjoy a publication with some of the attributes of both Stereo World and National Geographic. The story of this short-lived Underwood & Underwood publication, with its thinly covered young stereographer bravely guarding every cover, is told in this issue's feature "The Stereoscopic Photograph – The Only Magazine in the World in the Stereoscopic Field."
Post Office Rules
Force Change in Insert Policy

For many years Stereo World has provided dealers in stereographica and stereo related products the opportunity to distribute their auction lists and advertising flyers as inserts in the magazine’s mailing envelopes. With the mailing of the previous issue (Vol. 21 No. 5) we learned that the Postal Service has tightened up its regulations covering exactly what can be included in envelopes mailed under non-profit bulk mailing rates. Only material directly involving the non-profit maller (and identified as such) can be included in these envelopes. Since issue No. 5’s envelopes already included several auction lists from individual dealers, it was necessary to mail that issue at the more expensive (several hundred dollars) commercial bulk rate. That’s a drain on finances we can live with once, but not continuously.

In order for Stereo World to resume its bulk mailings at the non-profit rate, we must now include only things like NSA convention forms or other NSA material in the envelopes mailed to members who get their magazines at the basic, U.S. bulk rate. ALL INSERTS WILL BE INCLUDED AS USUAL in envelopes mailed via U.S. first class mail, to Canada, or overseas airmail. This means that if you wish to receive auction lists or equipment flyers with your magazine, you should make sure your renewal is for FIRST CLASS mailing—or upgrade your membership if you’ve already renewed at the basic rate. Honest, we didn’t invent this just to get more people to join at the first class rate. The Post Office rules are now VERY specific (even down to including “Inc.” as part of the NSA’s name on the cover) and using our first class mail option to preserve the possibility of distributing inserts was the only practical solution we and

(Continued on next page)

Don’t Miss the Big One!

The ISU Congress and the NSA Convention are the two biggest stereo imaging events in the world, and this year they’ve been combined in the Atlanta International 3-D Festival, June 27-July 3. Even if you missed every single show, exhibit, workshop, and sale table, and did nothing but chat with the amazing international assortment of people passing in the hall, this one would be worth the trip!

Missing Any Atlanta Registration Forms?
• General Registration • Trade Fair Table
• Schedule • Exhibits • Projection Shows
• Program Ads • Hotel Registration

Just contact NSA/ISU Atlanta '95, 241 Sycamore Place, Decatur, GA 30030, and specify the forms you need.

And as If You Needed More Reasons To Go...

IN ADDITION to the many other attractions at the Atlanta International 3-D Festival, we’ve learned of a special exhibit scheduled for the same convention hotel complex during this period. “The Sacred Art of Russia from Ivan the Terrible to Peter the Great” will feature 375 objects—icons, vestments, crucifixes and manuscripts from the Russian State Historical Museum in Moscow.

VIEW-MASTER collectors and photographers will be meeting during the Festival on Thursday afternoon, June 29. Those interested are invited to bring images or hardware from their collections for an international Show & Tell gathering. (And of course bring along your View-Master camera to properly record the event!)

INTERNET subscribers to the photo-3d electronic mailing list will again gather during the convention, this time with a more international emphasis. Subscribers will be identified by the @ sign on their name tags. (See Vol. 21 No. 4, page 31.)
Hand-held Wheatstone with Lenses

Recently, I purchased a viewer from a local antique dealer for $50.00. It is a fairly elaborate device that takes large and separate stereo views. On the arm of the viewer a "Carl Zeiss Jena" logo is stamped and then the word Germany. I cannot find any information on this viewer and am hoping a reader can identify it with some idea of value.

Richard Keyishian
East Williston, NY

Seaport Museum Seeks Images

Collectors with stereoviews of the New York City area may be interested in knowing that the South Street Seaport Museum is planning a major permanent installation on the history of the New York port from the 17th through the 20th centuries. The museum staff is trying to locate pictures relating to: the experience of Irish and other immigrants; longshore work in the port; merchant seamen and shipboard life; U.S. Customs; Port Authority; tugboat and pilot service; the coffee and tea trade; hotel and laundry workers; waterfront neighborhoods and businesses; labor unions; etc. Contact Steven Jaffe, South Street Seaport Museum, 207 Front St., New York, NY 10038, (212) 748-8634, fax 748-8610.

Neal Bullington,
Traverse City, MI

Beaches, Belles & Basics

Congratulations to Mr. Norman Patterson for his informative and entertaining article on bathing wear. (Vol. 21 No. 4.) As a result of my own researches into the topic I offer the following supplementary information extracted from a French newspaper; my copy doesn't show the date, but it appears to be from about the turn of the century. The illustration which heads the story is regrettably not only non-stereo, but indeed a drawing rather than an actual photo.

"Nous presentons aujourd'hui pour l'édification et instruction de nos lecteurs le dernier cri de vêtements de plage, ou meilleur dit, le manque en plupart ou total d'éléments de la mer. Nourri de l'icône du Sud nos lecteurs que les baigneuses ont dépouillé même leurs timides et leurs maillots de bain, au grand joie de leurs spectateurs. Nous nous rappelons affectueusement les jours de Louis Quatorze quant, on dit, cette habitude était ordinaire!"

Or, in loose translation:

"We present today for the edification and titillation of our readers the latest fashion in bathing wear, or, we should say, the lack of it in part or total. Our correspondent in the South tells us that the bathing beauties have shed both their modesty and their costumes, to the great joy of the spectators. We recall fondly the days of Louis XIV when, it is said, this practice was common!"

It would seem, then, that at least in some locales swim wear was considerably more daring at that time than Mr. Patterson reported. The newspaper article’s reference to earlier practices also confirms what I’ve read elsewhere, to the effect that in both Europe and the U.S. nude bathing was the usual thing in the 1700s and before. The idea of specialized bathing dress, it would appear, is therefore relatively recent, likely coinciding roughly with the regrettable accession of Victoria Regina. I should remark further that during my visits to the Côte d’Azur some years back I was delighted to find that the wheel had come full circle since good King Louis, and both topless bathing suits and full nudity were again thrillingly prevalent on the beaches.

T.K. Treadwell
Bryan, TX

Queen Victoria did, at least, enjoy stereoviews! You neglected to reveal whether or not you shed your OWN costume, adding to the Côte d’Azur’s thrills...

- Ed.

If you have comments or questions for the editor concerning any stereo-related matter appearing (or missing) in the pages of Stereo World, please write to John Dennis, Stereo World Editorial Office, 5610 SE 71st Ave., Portland, OR 97206.
Cover of the September, 1902 issue of The Stereoscopic Photograph. The woman in the filmy gown holding the stereo camera remained on the covers for nearly the life of the magazine with change limited to the background color.
"To utilize the magnificent discoveries in the realm of stereoscopic photography; to incite their intelligent use everywhere - in the studio, the schoolroom, the office, the home, and even in the church; to show their worth to the teacher, the physician, the parent; in a word, to unfold their priceless value in every phase and sphere of human life, is the purpose and mission of this magazine."

Much as this may sound like a quote from an early issue of Stereo World, it's actually the concluding paragraph from an editorial in the September, 1902 issue of the quarterly magazine The Stereoscopic Photograph. Even many knowledgeable collectors of stereographica have never heard of this short-lived attempt at a magazine illustrating the world and its people through stereographs.

With photographic magazines emerging as potential competition for the stereoview’s share of the image market by the turn of the century, it would seem only natural for someone to have combined the two media in an existing or new publication. Taking advantage of their stereoview firm’s considerable human, monetary and photographic resources, brothers Bert and Elmer Underwood took the plunge and launched The Stereoscopic Photograph in June, 1901.

Already owning thousands of stereographs of subjects all over the world, the publishers were able to illustrate most articles from existing stock and to draw on information and maps in the books published with U&U sets. As new images by Underwood stereographers in the field arrived, those scenes became natural subjects for more current articles. In either case, views appearing in the magazine both directly and indirectly promoted the availability of complete view sets and tours from U&U. It must have seemed a win-win concept to the Underwoods, who by 1901 were publishing over 25,000 views a day and selling 300,000 stereoscopes a year. (See the feature by William Brey in SW Vol. 16 No. 6.)
The Stereoscopic Magazine was intended as much more than just a promotional device for U&U, however. Serious (if not always scintillating) articles on subjects from polar exploration to presidential interviews, logging in Canada, and the shepherds of Mount Parnassus filled its pages along with numerous short items, regular columns and even poetry. At nearly 100 pages per issue with three-color covers, this was no simple house-organ like Keystone’s TNT. This was a publication aimed at the general public, a “high class and artistic magazine” available by subscription for 80 cents per year. (A tempting reaction on first thumbing through an issue is to call it a stereo version of The National Geographic, although differences become readily apparent after reading a few pages.) Subscriptions were evidently independent of any purchase of U&U views or sets, and were also available internationally through U&U dealers.

The first issue of The Stereoscopic Photograph (June, 1901) included the following very enthusiastic piece on stereo coverage of current events—a coverage which was to appear all too rarely in later issues but was of course available in U&U sets!

**Timely Scenes**

Should we keep pace as the world moves on? Is it an undertaking worth while to record stereoscopically every important occurrence of world-wide interest? It is comparatively a new thing to bring current happenings so vividly before our eyes. By means of the stereoscopic photograph these history-making incidents are recorded incomparably better than any word description can picture them, and with a vividness that no single photograph can approach. Through the stereoscope one is forced to comprehend an important occurrence in a perfectly true way, it being as impossible to form any misconception as it would have been if on the spot when the stereograph was taken.

This department of the work requires a competent staff of operators always in readiness to go to any event of great interest. When the trouble between Turkey and Greece was brewing, Mr. B. Underwood took it upon himself to go and stereograph what was then transpiring on the Macedonian frontier and in Crete. Well equipped with stereoscopic cameras and plates he hastened to Northern Greece, accompanied the Macedonian insurgents for about two weeks, photographing the adventures of that daring band of kilted warriors under command of their chieftain, Davalis. Every man of them was sworn to meet death rather than surrender. Mr. Underwood remained with the Greeks during the war, and by means of stereoscopy preserved the scenes of that conflict as no other record could.

When the warship “Maine” was blown in Havana Harbor, that wreck was imme-
diately stereographed, and the Spanish-American war was so reproduced that an accurate record of many of the stirring incidents enacted in Cuba and Porto Rico can be seen to-day with a realism that is astonishing. Mr. H.A. Strohmeyer and the other operators did their work well.

Who would not like to follow by easy means and free from danger, the British conflict with the Boers through Cape Colony, the Orange Free State and the Transvaal, and finally, to visit Lord Roberts at his headquarters in Pretoria? Mr. H.F. Mackern was the one dispatched to that seat of war. He was with Lord Roberts during many thrilling experiences and photographed the valiant actions of numberless British heroes. He also photographed the historic ground covered by Gen. Buller and many others, ending his fifteen months work by a tour through Zululand.

Prof. Jas. Ricalton was the operator selected to shoulder his camera and find Admiral Dewey and his fleet in Manila Bay, and it was he who joined Gen. Otis' army and made such a reputation for keeping his camera active on the firing line in Luzon.

When the eyes of the world were focused on China, Prof. Ricalton, who is not only a skilled stereoscopic operator, but experienced in war photography, was particularly the man qualified to go. Amidst bursting shells and booming cannon he accomplished his difficult task and brought back for us to see the bombardment and ruins of Tientsin, the executions of Boxers and pirates, their heads hanging in cages on the city walls, and other horrors of war. He proceeded to Pekin, secured the places of interest connected with the famous siege there, invaded the secret places of the "Forbidden City" to the very Imperial throne itself, and has transported to us the innermost places of the Emperor and Empress-Dowager, the Tsung li Yamen, etc., etc. He has even brought back for our study stereographs of the most celebrated Chinese personages and the leaders of the allied armies, and through the stereoscope these are introduced to us as large as life.

We may turn from the exciting scenes of war to that greatest disaster of modern times caused by wind and wave, the wrecked City of Galveston, Texas. It was

Mr. Leadbeater who was sent to picture the ruins of that devastated southern city. Only those who have seen the ruined city through the stereoscope or those who were there immediately after the floods subsided, have any adequate knowledge of that awful calamity.

It was of course important to stereoscopically preserve the great Paris Exposition, which is now revealed to thousands by a classified series of stereoscopic photographs so arranged and mapped out as to give any one a continuous stereoscopic trip through its beautiful grounds and magnificent buildings.

The immediate worth of all these things is more than can be told. We can gather around the actual scenes as we hear and read of them. There is no word picture that can misshape our imaginations of a place or occurrence when we have once seen it through the stereo-

---

A typical page from The Stereoscopic Photograph, in this case from an article on the coronation of King Edward VII in the September, 1902 issue. The images in these pairs are 45mm wide, about as large as any of those reproduced in the magazine. Frames ranged from ornate artworks reflecting themes of articles to simple stereo card outlines.
Stereoscopic Photography wasn't above using stereoviews as decorative graphic elements, much as other publications of the day tilted, overlapped and cut up flat photos. Scope. Truth crushed to earth by imaginative newspaper drawings will rise again.

When larger images were presented, the original "stereoview" look was sometimes suggested by means like this, and other times simply abandoned. A few full-size views were printed alone on pages to be viewed by holding the magazine horizontally.

H.F. Mackern, the Underwood & Underwood stereographer who covered the Boer War. He also photographed in Portugal and Spain, and died while on assignment in Mexico.

"What would we give for a good stereograph of Columbus as he landed and planted the Spanish flag on our island of Porto Rico?"

An illustration of how the stereoscopic photograph is coming to the front, on the occasion of President McKinley's inauguration a special stand was constructed for our stereoscopic artist, Mr. Henry A. Strohmeyer, by the architect of the Capitol, and was given by the committee such nearness to the President that the operator practically stood with the President, while all other photographers were placed in remote stands far in the rear. In an event of such national importance, this official recognition of the superiority of the Stereoscopic photograph as an infallible record and illustration, begin to realize.

Also in the first issue, an item in the "Snapshots" column dealt with stereoscopy's acceptance as a journalistic and historical medium. While stereojournalism never became the main focus of the magazine, U&U itself would later become a news photo company after ceasing publication of stereoviews in 1920. Between sizes thrown in. Unfortunately, nearly half of the views illustrating articles are the 2½ inch size, and a surprising number of these (especially when the mount is not included) are pseudoscopic!

No mention is found of any viewer being available for the magazine's stereos, and the variation in sizes could easily lead to the conclusion that U&U didn't actually intend that the images be viewed in 3-D at all. It seems hard to accept that a company like U&U, selling ten million views a year, would really worry about people viewing or even cutting out pairs from the magazine instead of buying published views. Perhaps, as happens in books and magazines today, layout and space considerations outweighed the viewability needs of stereographs. But in effect, many pages of The Stereoscopic Photograph with their tiny views resemble an auction or sale catalog more than a stereoscopically illustrated publication. While it was indeed "the only magazine in the world in the stereoscopic field" at the turn of the century, the record for being the first such publication (with the
The advantages of stereoscopic images in education were outlined in a number of articles, some wordy and repetitive enough to make the short life of The Stereoscopic Photograph quite understandable. Some of the best points are included in this excerpt from “Schoolroom Travel” by G.J. Smith in the September, 1902 issue.

The problem of enriching the minds of children with a manifold contact with the actual is solved by the stereoscope. Illustrations in books, as I have said, are good and have contributed much to the great work of giving real knowledge, a store of visualized impressions for the mind to work with. But with the stereoscope in the school-child’s hands, he may range the inexhaustible world almost as if on actual travel, because with a much keener feeling of self-transference than is possible with any other means short of the impossible travel itself...

As our children cannot themselves go out into the world in body, to see and possess it, let us nevertheless take them to the world, not in words only, or even in pictures only, but in the most vivid and satisfying way available, in stereoscopic photographs.

Whereas today’s readers often need to have the difference between a stereopticon and a stereoscope. The Traveller,” and the next number will appear under the new name.

Along with the name change came a new slogan under the masthead that replaced the reference to stereo with “Devoted to travel, art, and education.” While Daniel J. Ellison remained editor, flat photos largely replaced stereographs as illustrations in the articles. Most are clearly halves of U&U views, but in general The Traveller looks little different from other early 20th century photo magazines.

One exception to the change in emphasis was the column of stereo photography techniques by Theodore Brown, which continued to be illustrated with stereographs. Brown’s 1903 book, Stereoscopic Phenomena of Light & Sight, mentions The Traveller in a chapter on “The Commercial Side of Stereoscopy.” (See Stereo World Vol. 21 No. 1, page 48.) While the publication’s circulation figures aren’t known, the name and other changes don’t seem to have helped improve them. No references later than 1904 can be found to The Traveller in library records.

Even if the magazine (under either name) didn’t print many easily viewed stereos, it presented numerous, lengthy articles expounding on the wonders and potential of stereoviews themselves. View publishers who passed off paired flat photos as stereos were the subject of a short item in the September, 1902 Stereoscopic Photograph.

Stereoscopic Photographs

Whoever has seen the modern stereoscopic photograph through a stereoscope, realizes how tame and unsatisfactory are the best plain photographs and engravings. Children have been robbed of a rich inheritance from the idea that the stereoscope was for amusement, and from the fact that the world has been imposed upon by having ordinary photographic productions mounted for its use. These worthless pictures, even in the stereoscope, no more compare with the stereoscopic photograph than a wax flower does with the fragrant bloom which Heaven has called forth from the living, thrilling plant.

Besides decorative frames around the views, a feature on Egypt in the June, 1902 Stereoscopic Photograph was illustrated with this drawing that tied the theme in with the publication’s cover. As far as is known, Underwood & Underwood employed no women as stereographers.
Among ads for stereo cameras, business colleges, patent medicines, dry plates, Mennen’s Toilet Powder, and the magazine itself. Sets was this promotional ad for the Stereoscopic Photograph.

The Teacher and the Stereograph

Before concluding this article it would seem relevant to add a word regarding the comparative pedagogical value of the Stereograph and the Stereopticon. Unquestionably each has its field, one perhaps, as has been said, a deep field, the other a wide one. That is to say that while the stereopticon method will enable the lecturer to cover a considerable amount of ground in a comparatively short time, the stereograph is incomparably better for an intensive study of any particular part of the earth’s surface. And then, aside from the more formidable difficulties attending the use of the stereopticon, it has been observed that the pupil rarely, if ever, develops a sense of location in the place represented, as he does in the stereograph. With his eyes in the closely fitting dark chamber of the instrument he loses sight of everything except the life-like reality before his mind, and thus a degree of mental concentration is effected which is secured by a stereopticon view if at all, only at isolated intervals. Thus, the student is deprived in the stereopticon of what is perhaps of more value to him than the addition to his store of knowledge—namely, the emotions which his actual physical presence in the place reproduced would have caused.

One of the more interesting articles for today’s collectors described and illustrated the steps in the process of making a finished stereograph. It appeared in *The Stereoscopic Photograph* of June, 1901.

**Stereograph Making**

The process of making stereographs is far more complicated and protracted than it appears from an evanescent point of view. They pass through a bewildering multitude of hands from the photographer who secures the exposures upon the plates by means of a binocular camera, until their deposit in the stock room ready for sale.

For field work it is essential that the photographers should not only be skilled in their work, but should possess a keen artistic taste in order to select their subjects and the best standpoints from which to photograph them. When the exposure has been made (for which the finest quality of plates should be utilized), it next devolves upon a man of the highest technical ability as a photographic chemist, and one who has the best judgment, to develop the plate, and to bring out all that there is on it.

But it is also in the prints that the greatest care has to be exercised, since it is these finished pictures that arrest the attention of the purchasers, influencing them either favorably or otherwise in their criticisms of the stereographs. Continued experiments have incontrovertibly proven that the reliable albumen double-coated paper is by far the most satisfactory for obtaining the finest results. A finished albumen stereograph possesses a degree of brilliancy, richness, distinctness of detail, and faithful gradation of the delicate tones, such as is not yielded by any other so-called high-class papers, which invariably are deficient in those salient characteristics essential to the successful stereograph.

The first operation is the sensitizing of the printing paper. This is accomplished by floating the paper in a bath containing a solution of Nitrate of Silver for two or three minutes, the time varying accord-
ing to the time of the year. After its exodus from the sensitizing bath it is dried, and then placed in a fuming box, where it is exposed to the fumes of ammonia for fifteen or twenty minutes. Fuming completed, the paper is ready for printing, and for this purpose it is cut into the size necessary for a stereograph. The time occupied in printing depends upon the brilliancy of the sunlight and the density of the negative. The manipulation of the albumen paper requires greater skill and judgment on the part of the printer than is required with other printing papers, all of which are more economical both as regards chemicals and labor. With the albumen paper, cheap labor is absolutely impossible. When the prints have attained a sufficient depth they are ready for toning. Prior to that process, however, the prints are trimmed to remove superfluous paper.

The prints are first subjected to a prolonged washing to remove the free Nitrate of Silver from the paper. This accomplished, they are passed through another washing bath and thence transferred into a toning solution of Chloride of Gold, where they receive that rich tone and color characteristic of these stereographs. The satisfactory gauging of the tone also calls for great judgment and artistic taste. When the prints have attained the necessary tone, another operatorsubjects the prints to a thorough washing in a bath of salt water for another twenty minutes. From this bath they are transferred into a huge tank of running water where they are kept in motion by boys, so that every trace of all chemicals may be entirely effaced, an operation which occupies from one to two hours. When this washing is accomplished, the toning of the stereographs is completed and they are spread out in blotting pads to dry.

The prints are now transferred to the mounting department. First a girl takes them one by one and stamps them with a die which simultaneously rounds the prints at the top, and cuts off squarely at the sides and bottom. The mounter then takes them in hand and places them face downward on her table. They are first dampened, and then each print is pasted separately. As fast as they are pasted, another operator mounts them upon the cards and a third operator insures their lying evenly thereon by rapidly passing a small roller over the stereograph. The two pictures are not mounted in one print, since stereographs mounted in this manner, though requiring half the labor, lack symmetry, general beauty and effect. The mounted prints are once more placed between sheets of blotting paper to dry, after which they are passed through the burnisher, which imparts a rich gloss to the stereographs. Burnishing practically completes the manufacture of the stereographs.

Thanks to: Raymond Holstein, curator of the NSA’s Oliver Wendell Holmes Stereoscopic Research Library, originally suggested this article and supplied photos and excerpts from the issue of The Stereoscopic Photograph in the Library’s collection. John Weiler supplied more copies of The Stereoscopic Photograph as well as The Traveller.
Sure, we've been hardened by the media hype for all these years, confused by the coke-bottle crispness of the images, sickened by the dry heaves of lagging display rates, and numbed by the bizarre colors of LCD TVs an inch from the eye. These problems are being solved rapidly as the big money descends on a new medium that offers the prospect of total distraction of commerce-space, and the full mind-body immersion in market rapture. This is the way VR is going to pay its way.

Virtual Reality is coming. And it's going to be much worse than you ever imagined.

Photographic enthusiasts of the extra dimension make modest claim to virtual imaging technology. If flat photographers take up computer imaging and desktop photo manipulation as an extension of their art, then surely 3-D shooters have dibs on VR technologies to extend their own creative search. If nothing else, stereographers can argue that they are the giant shoulders on which VR genius stands.

Fat chance. The qualities that make the 3-D photographic viewing experience so special are anathema to an industry that seems increasingly driven by the market demands of mass entertainment. As VR gets real, the remorseless logic of the market removes stereoscopy from the viewing equation in the same way that it was pushed aside with celluloid and chemical technologies. Let's face it, good 3-D is a lot of work, for the manufacturer and the viewer. Short of the educated eye required for free viewing, something is always being required between viewer and image: either lenses, alternating shutters or anaglyphs or something. High hardware costs mean high through-put — meaning that you've got to keep the lines moving in order to keep people paying in order to amortize the cost of all that fancy equipment. It's just too much trouble for the limited benefits of stereoscopic 3-D in VR.

"Limited benefits of 3-D!" you harumph. Before you jot off a letter to the editor, think about it for a moment. By 1930 with the introduction of talkies, photographers and cinematographers had basically figured out how to record the world accurately within the limits of two-dimensional film technology. Even without stereoscopy, the third dimension was portrayed through composition, lighting and depth of field. Artists and exhibitors and viewers decided that the "wow" factor of true 3-D wasn't worth the hassle. Because of the rigorous production and presentation required for pleasant viewing, 3-D has never quite made it as a mass form with film technology.

Technicians seem mostly to have concluded that the benefits of stereoscopic VR are not worth the added cost in computer processing time and sophisticated hardware. If you have a choice of moving through a world in 3-D or merely seeing it in 3-D, what are you going to do? Interactivity is what makes VR — well, VR.

Virtual Disney

That said, given giga-bucks and giga-tech, stereoscopy is the icing on the VR cake. That's certainly the promise of "Aladdin", Walt Disney Company's state-of-the-art Virtual Reality display at Walt Disney Imagineering Labs, an exhibition/study site at Disney World. While larger groups watch the action on monitors, four volunteers are hooked up on head-mounted displays (HMDs) to tour the town of Agrabah, one of the scenes in the Disney feature animation film Aladdin. This is only the testing phase of a system that will eventually allow hundreds at a time to fly around on a magic carpet in a "movie-quality" VR world. A massive array of computers provides a seamless experience that closely
The filtration sequence in the Brewery Adventure takes viewers on a microscopic roller-coaster ride through porous filters that remove impurities from young beer. Telepresence Research also designs video-based robotic remote presence Virtual Environment systems. Telepresence Research © 1994.

The Virtual Brewery Adventure flies through a tank of malt as starch chains are broken apart by fast-moving enzymes. Parts of the computer generated Adventure consist of photorealistic images of the brewery plant and other parts reveal a non-realistic fantasy environment on a microscopic level, telling the story of how beer is brewed. Telepresence Research © 1994.

The VR experience simulates (in fully immersive 3-D) big screen Disney animation. Even with all that heavy-duty computer power, the focus remains on immersion, so interactivity is confined to flying around on the carpet. Fortunately, processing power is the least of all bottlenecks for the future of VR, and Disney has apparently made tremendous strides to resolve the interface problems associated with cheaper systems. Viewers report an astounding experience.

Rub Disney's magic lamp for a genie's-eye view of what's ahead for VR. As a realistic modeling of a completely fake world of Arabian caricature it's great. As a publicity adjunct to a motion picture (soon to be a ride along the lines of "Pirates of the Caribbean"), well, that's show biz.

Virtual Doom

Without the massive resources of Disney, the rest of the industry has mostly left the genie in the bottle. For attractions that have to pay as you go, VR becomes something like an upgrade of pinball, another version of the old arcade formula. The big hit at the New York Virtual Reality Expo last December was the game Doom adapted to VR. Doom is one of the most notorious of the new crop of "first person" arcade/computer games that allow the player to actually be the murderer/sociopath laying waste to hordes of other killers in full abattoir ambience. This murderer's-eye-view of low-res slaughter is the working definition of the pornography of violence. Advice to parents: instead of letting your kids watch this stuff, give them a pack of Cools and send them to the pool hall for a more uplifting cultural experience.

The expense of hardware and software development means that industry profits will come from arcades, a.k.a. location-based entertainment. These systems are emphatically not stereoscopic (even though some of the hardware has the capability) because the emphasis is on "through-put", which means you line up, pay up, sit up, and clear out ASAP.

Hygiene, set-up and adjustment time, and hardware cost for stereoscopy all throw the through-put financial equation out of whack.

The first wave of arcade installations from Virtuality Entertainment Inc. were 3-D, but more recent versions have abandoned stereoscopy. Spokesman Chris Yewdall explained the demands of the market. "What drives entertainment is the return on investment. For people using the head mounted display it is a difficult job to differentiate between stereo and mono vision, and the experience is just as much fun in mono as in stereo. The immersive quality of the experience overpowers the desirability of 3-D viewing. It's the content that makes the difference."

3-D has been a tantalizing prospect for home video gaming ever since the debut and demise of Sega's LCD shutter glasses a few years ago. Now, Virtuality Entertainment has teamed with Atari to produce a dirt-cheap head mounted display for use with the Atari

STEREO WORLD January/February 1995 13
Jaguar 64 bit game system. The HMD is promised for Christmas, but armchair VR generals have been disappointed by other manufacturers before.

**Virtual Beer**

When a large corporation wants a VR exhibit in its visitor's center, sophisticated stereoscopy becomes far more likely than in an arcade. Sapporo Brewery has opened a beer museum at its Tokyo headquarters featuring the "Virtual Brewery Adventure" created by Telepresence Research of Portola Valley, CA. Viewers can look through a maneuverable BOOM 3-D viewer, or twelve passive viewers, or watch on giant 2-D screen projections. The exhibit gives people a range of choices for interactivity and immersion. Viewers fly around the brewery and swoop into vats of beer before selecting different aspects of the beer-brewing story. It's a fun interpretation of what would otherwise be a "dry" presentation of an industrial process. The exhibit gives people a range of interactive video screens and compete with other players rather than the computer. Sites in five U.S. cities are linked for play between customers.

Virtual World Entertainment does have plans for a 3-D HDTV monitor that will replace the smaller displays currently in use. Employing Infinity Optics technology, the display will employ an array of mirrors to project a 3-D image on a virtual proscenium behind a screen, and is promised for later this year.

**Virtual Sources**

Beyond the entertainment market, stereoscopy is an important part of VR technologies developed for training, design and military applications, which lead innovation in the industry. Telepresence on battlefields and in other dangerous environments (where robot cameras can go but people can't) really defines virtual reality, since it offers the only dose of "reality" we're likely to experience in VR for a long time to come. This kind of experience, recording reality for examination somewhere else, some other time, is also closest to the paradigm of stereo photography.

The Jason Project, supported by Electronic Data Systems, the National Geographic Society and Woods Hole Oceanographic Institute is already bringing telepresence experience to kids in grades four through twelve via Primary Interactive Network Sites around the country. At these sites, students can watch and talk to scientists at work in the jungle or undersea, and even guide the cameras of the remote-control robots gathering information. While many of the devices record in stereo, the uplink does not support 3-D. But it's fascinating to imagine a future in which you'll be able to download live VR from a probe scuttling across the real red deserts of Mars, or from some deep-sea fumarole squiggling with giant sea worms. Now THAT'S entertainment. Well, maybe not, but at least it's the real thing.

Fortunately, for those of us who have completed grade school and are without either a security pass to the Pentagon or a three-day pass to Disney World, other options are available. Garage VR has arrived, and enthusiasts and manufacturers are providing plenty of options for those packing a PC and interested in constructing their own reality. But if the clock on your VCR is still flashing 12:00, be warned, PC-based VR requires a pretty steep learning curve. Many of the authoring tools require a knowledge of C-based programming. This is changing, and in the meantime, there is an active and supportive community of reality tinkerers accessible by Internet, and plenty of literature to guide the neophyte. While hardly complete, the following list should point your data glove in the right direction. Much of this information is based on the compilations and writing of Robin Hollands (R.Hollands@Sheffield.ac.uk), the dean of garage VR and contributor on the subject to a number of publications.

- VRASP, the Virtual Reality Alliance of Students and Professionals, is an international association and educational forum dedicated to increasing public knowledge of virtual reality applications and furthering development in the field. The association publishes *Pixelations*, a periodical devoted to the latest industry news and musings of VRASP members. On the net, VRASP maintains a public mail list, VRASP@VRASP.ORG (to subscribe send mail with "subscribe" in the message body, to unsubscribe, "Unsubscribe"). On the wide web, URL http://www.vrasp.org/vrasp/. (Tel. 908-463-VRVR.) This is a serious outreach group and is very interested in expanding membership.

- Another organization, the VR Special Interest Group, is an on-line association that facilitates contact between VR enthusiasts. For more information, E-mail Dave Blackburn at breden@well.sf.ca.us.

- In April, Fifth Dimension Technologies will tour a one-day seminar to ten different locations around the US. The program will offer an intensive look at hardware and software VR solutions, and examine prospects for the industry. Call 800-235-6646 of E-mail 100076.404(compuserve.com for more info.

A pilot at the controls of a Virtual World Entertainment "Virtual Reality Pod" ready to do interactive battle with another customer's robots on a flat video screen.
The Virtual Brewery Adventure exhibit in the Sapporo Beer Visitor's Center in Tokyo. The BOOM 3C+ viewer controlling the interactive display is at right rear, while passive stereoscopic viewing stations fill the room. Telepresence Research © 1994.

- There's been plenty of ink spilled on VR, and many interesting magazines are publishing for the burgeoning community. CyberEdge Journal is a bimonthly newsletter on VR that includes news, business reports, book reviews and other VR news. Cyber-Edge Journal also distributes a wide variety of material related to VR. (Tel. 415-331-3343.)

- Virtual Reality World is a slick bimonthly dedicated to VR devotees, and contains a comprehensive list of cheap VR hardware. There is no shortage of books on VR subjects. Virtual Reality Playhouse by Nicholas Laszloff (Walter Group Press ISBN 1-878739-19-0) was the first, back in the days of the Mattel Power Glove and Sega shutter glasses. (Waite Group Press publishes a number of books on the subject, not listed here.)

- The CyberMaxx, a consumer viewer by VictorMaxx, has attracted a lot of attention. Listing for around $799, this device is a true HMD, fully blocking the external view. (Tel. 708-267-0007.) Forte Technologies has introduced a device with similar capabilities, the VFX-1. (Tel. 716-427-8595.)

- Virtual Reality Special Report covers applications, news, products and developments for non-technical readers. Published by Miller Freeman (Tel. 415-905-2200). Other magazines, such as Wired and Monto 2000, are not devoted exclusively to VR, but keep tabs on the field and offer slick journalistic coverage and interesting editorial comment on all sorts of ripples in the new wave of information technology.

- 3D Artist includes relatively little on VR itself, but is packed with the latest on products and developments in every aspect of computer art from animation to fractals to Windows. (Tel. 505-982-3532.)

- Every month, more books appear on VR subjects. Virtual Reality Playhouse by Nicholas Laszloff (Walter Group Press ISBN 1-878739-19-0) was the first, back in the days of the Mattel Power Glove and Sega shutter glasses. (Waite Group Press publishes a number of books on the subject, not listed here.)

- While the VR lifestyle statement seems to require dressing up in a neoprene leotard and a sculpted lifestyle statement, there are other less immersive, less expensive and more comfortable options available. Simsalabim offers a simple solution to viewing 3-D on a computer screen, a simple optical device that reduces vertigo. The personal display system retails for $599 and a PC-module offering head tracking and PC compatibility lists for around $200 more. (Tel. 206-382-7410.)

- The Garage Virtual Reality, by Linda Jacobsen (Sam Publishing) is considered to be the bible by many home-grown VR devotees, and contains a comprehensive list of cheap VR hardware.


- Most garage VR is done on fast PC's (Pentium or 486/66 and a fast VGA card. A VL or PCI bus is required. There are also applications that run on Macs and Amiga computers, although PCs are the platforms of choice. Since most professional work in VR is done on high-end workstations, the input devices—gloves, 3-D tracers and trackers—and head mounted displays, were, until recently, geared for big-buck solutions. But in just the last few months a new range of low-cost products has come on the market, including a HMD for under a thousand dollars.

- Virtual I/O has introduced a lightweight display system, "I-glasses!", for VR and video, with stereo sound and vision. The peripheral environment is visible around the screens, which reduces vertigo. The personal display system retails for $599 and a PC-module offering head tracking and PC compatibility lists for around $200 more. (Tel. 206-382-7410.)

- The 3D World catalog from 3D TV is an absolute must for anyone interested in VR or 3-D on video or computer. (Tel. 415-479-3516.) Prices for software, tracking devices, stereo shutter glasses and other 3-D goodies are rock bottom and often available from no other source.

Creating your own world rather than buying into somebody else's is the ultimate personal statement for the rugged cyber individualist. The garage VR prairie is still wide open to pioneers who wish to leave the consumer market. So point your power glove west and go virtual. Otherwise, see you in the line at Disney World.
John Stuart has identified the baseball view that was shown on the inside of the front cover of the May/June 1993 issue. It is Keystone No. 32817 (KU97849), taken by George Lewis on October 6, 1932. It shows Babe Ruth in batting practice during the World Series at Wrigley Field in Chicago. New York Catcher #9 is catching.

The caption reads “Ruth at bat as a fast one comes over, World Series 1932.” (See SW Vol. 20 No. 5.) Brandt Rowles has come up with an identification for the Camp Sullivan view shown in the Jul./Aug. '94 issue at the bottom of page 33. He writes, “This was the site of the famous Revolutionary War battle near Elmira, NY. I'd say that E.O. Beers likely commanded a local
militia group, celebrating the centennial of the battle.” Brandt has seen another view of the site with a hand-written label: “South line of Newtown Battlefield, Aug. 29, 1779. 5 nations defeated.”

Our first two unknowns this time come from Dave Wood. They are green cards by C.R. Savage, and show what looks like a western smelter or other type of mining operation. Does anyone recognize this site?

The next card is cream-colored, “Photographed by Bierstadt, Bros.” and shows a scene of a small town. There don’t appear to be any large diagnostic structures, but perhaps someone is familiar with this site.

Finally, we have a faded purple card with orange reverse, showing the main street of a town, complete with bridge and several church spires. Does this scene ring a bell for anyone? (No pun intended.)

Going crazy guessing the who, what or where of unidentified views in your collection? Get help from the entire NSA membership by sending views to The Unknowns, 5880 London Dr., Traverse City, MI 49684 with return postage. Even views with printed titles from major publishers can sometimes fail to identify some aspect of the subject. (Unusual subjects or interesting street scenes are more likely to be printed here than generic houses or pastures.) Send information on subjects you recognize to the same address.
Kit for Kids

by David Starkman & John Dennis

While no cameras are included, the instructions emphasize that the most basic, inexpensive, non-flash, non-panoramic single use cameras are what is required to complete the kit. They also make clear that the cameras must be mounted and shot vertically, and that the shutter buttons must be pressed "at exactly the same time" while shooting non-moving subjects. This dependence on manual synchronization makes the kit marginal at best for most serious stereo photographers, but a child with a real interest in 3-D, some patience, and a willingness to learn may be able to produce some good pairs—in part because of the need to find interesting, stationary subjects. Unlike the Loreo stereo camera or Fuji's new mirror 3-D frame-splitter attachment for single use cameras, the 3-D ADVENTURE kit produces full frame 35mm print pairs that take advantage of whatever quality the disposable lenses have to offer. The instructions remind users to have only 3.5 x 5 inch prints made, and which, once assembled, provides easy and comfortable viewing (although adding a handle to the bottom would help). The square, plastic 8-inch focal length lenses and the full length septum provide sharp, instant fusion for most people who pick up the less-than-elegant looking device. It can also be used to view vintage stereoviews.

While some kids will find the 3-D ADVENTURE kit hopelessly primitive and simplistic, others will be intimidated even by the effort required to mount the prints. But for some of the kids in between, the kit could be a practical introduction to stereography and the beginning of a life long interest.

The kit is expected to retail at about $25.00, and anyone giving one as a gift would probably want to buy a pair of single use cameras to go with it. For availability or ordering information, contact Starisis, 1610 Beverly Place, Berkeley, CA 94707, (510) 526-1830.
Consumer Electronics 3-D and PhotoCD Anaglyphs

by Lincoln Kamm

Proof that 3-D is in the public eye could be seen at this year's Consumer Electronics Show. Held every year in Las Vegas, it showcases what's new in the world of consumer-based technology. The three most interesting 3-D items were the Virtual Boy (Nintendo), Multi-Image CD case (Gelardi Design & Insight, Inc.), and LCD shutter glasses hook-up (3-D TV Corp.).

Virtual Boy is a little like a stereo version of Game Boy. It will be available in summer, 1995 and will retail for somewhere around $200. It has a lot of potential, and will be fantastic if Nintendo puts out some games as good as the ones they have for their other systems. If Virtual Boy sells half as many units as its monocular counterpart, it could usher in a new generation of 3-D enthusiasts.

The multi-image CD case is a normal CD case with lenticular grooves etched into the plastic front. The cover art is printed as usual, but with more than one image blended into the lenticular format. It looks amazing! For more information call Anthony Gelardi at (207) 967-0679. If you want to see crisp, sequential 3-D on your TV in vibrant, non-distorted color, give 3-D TV Corporation a call.

They have just lowered the price on the glasses and adapter needed to do just that. Call Michael Starks at (415)-479-3516.

Digital Anaglyphs

Want to make your own anaglyphic stereos on your computer? If it's IBM compatible and you have a CD-ROM, this may be the program for you. Synthonics Incorporated's 3D Maker" can do it. All you have to do is have your stereo slides or negs transferred to PhotoCD, pop the CD into your computer, load up the left image and then the right, and click a button on the screen—that's all there is to it! The program is very fast, has a fantastically simple interface, and can read PCD file format (PhotoCD). You can save the composite image and take it to a store like KINKO's to have it printed out on a color printer if you don't have one. Of course you can just look at your anaglyph on the monitor, but why not make your own posters?

Synthonics has a version that can do the same with animation on the computer as well. If it's as easy and effective as 3D Maker, it will be a winner. 3D Maker is available now for $69.95. If you can't find it, call Synthonics at (800)-497-0787.

Virtual Reality Paper

No, this isn't an article from some academic journal about the latest interactive computer software or head mounted display hardware. In fact, it's an excellent example of how a term that's caught the attention of the media and the public can be applied to almost any product on the market with a bit of imaginative promotion. Virtual Reality Paper is paper to write on—to then be viewed through anaglyphic glasses that make the surface of the paper drop behind your now floating words.

The concept may not involve much in the way of interactivity or immersion but it does have an actual stereoscopic element, which many sophisticated, actual VR systems now lack. (See the VR article in this issue.) Not too many years ago, this product would have been called "3-D Paper" or something like that, but virtual reality is the phrase that now represents the the cutting edge in visual technology—even when the cutting could be done with a pair of scissors.

The red and blue printed letter-size paper comes in three anaglyphic designs. The "Basic Background" floats an unobtrusive pattern on a single plane behind whatever is written, typed or printed on the paper. The effect is subtle but surprisingly pleasing—sort of like having your message become part of the credits in a 3-D movie. The "Drapery" design features a theatrical arch and curtains with several 3-D planes, suitable for announcements, programs, etc. The "Tri-Fold" has anaglyphic patterns printed on both sides for use as a brochure. For viewing, envelopes made for the stationery incorporate glasses on the back with perforations for removal after opening. In the samples tested, the basic and drapery designs worked well (they'd be ideal for regional stereo club meetings announcements!), but the tri-fold patterns were contrasty enough to be completely un-fusable.

Virtual Reality Paper is a product of Micro Format, Inc. and is available from Cygnus Graphic (Box 32461, Phoenix, AZ 85064) in a 4-sheet sample pack with one viewer-envelope for $2 postpaid in North America. For other prices or quantity orders, contact Cygnus, .

...Virtual reality is the phrase that now represents the cutting edge in visual technology— even when the cutting could be done with a pair of scissors.
A variety of writers from the 19th century to the present have recorded their thoughts about the significance and potential of stereoscopic images. (Oliver Wendell Holmes is only one example, if the best known.) Others have expounded at length on their favorite theories of stereo vision or have enthused over systems of 3-D photography or viewing from the clever to the ridiculous, most now long forgotten.

StereoScript will present excerpts from the more interesting or unusual of these writings, whether historical, philosophical, technical, promotional or humorous. The column will vary in length, sometimes revealing the thoughts of a single writer and sometimes including short excerpts from a number of sources on related topics. The sources can be nearly any variety of writers from the 19th century to the present. They have often been inclined to make these cover several different countries rather than to get fifty or one hundred subjects on one country. Frequently people buy miscellaneous views rather than complete sets or tours, because they don't appreciate the very great advantages to be derived from the classified tours (whether small or large) which cannot be gotten from a miscellaneous collection.

A collection of small, disarranged, miscellaneous stereographs (from a number of different countries) is not likely to be looked upon by the average person as having much permanent value. Such a collection is sure to be considered more as a passing amusement, and, just to the extent that this is the purchaser's attitude, his interest in his investment will not be as great as it otherwise might. Disconnected pages of descriptions from an observing traveller's note-book would unquestionably have some value, but this same traveller's complete notes, systematically arranged, would be much more valuable, and the latter would be likely to be referred to fifty times where the disconnected and unrelated notes would not be referred to once.

Moreover, complete tours, such as Palestine, Italy, Switzerland, United States, &c., give a comprehensive idea of the respective country such as a few unrelated stereographs from each country cannot possibly give. After a person has gone over one of these complete stereoscopic tours with considerable thoroughness, he ever afterwards will have a more vivid and intelligent conception of that country.

For different reasons many persons cannot be induced to take one of the complete larger tours. Such persons should endeavor to obtain as large a portion as possible of the tour that he may be especially interested in. Some of the larger stereoscopic tours are subdivided into small sections on particular localities, such as Jerusalem, Tiberias, Moscow, St. Petersburg, Rome, etc. We strongly emphasize the value of these small educational sets as being indispensable for the traveller and the student, the home and the school.

**The Value of Classified Stereographs**

A serious mistake has been made heretofore by a large number of people who have bought miscellaneous stereoscopic photographs - that is, they have bought from thirty to one hundred views. They have often been inclined to make these cover several different countries rather than to get fifty or one hundred subjects on one country. Frequently people buy miscellaneous views rather than complete sets or tours, because they don't appreciate the very great advantages to be derived from the classified tours (whether small or large) which cannot be gotten from a miscellaneous collection.

A collection of small, disarranged, miscellaneous stereographs (from a number of different countries) is not likely to be looked upon by the average person as having much permanent value. Such a collection is sure to be considered more as a passing amusement, and, just to the extent that this is the purchaser's attitude, his interest in his investment will not be as great as it otherwise might. Disconnected pages of descriptions from an observing traveller's note-book would unquestionably have some value, but this same traveller's complete notes, systematically arranged, would be much more valuable, and the latter would be likely to be referred to fifty times where the disconnected and unrelated notes would not be referred to once.

Moreover, complete tours, such as Palestine, Italy, Switzerland, United States, &c., give a comprehensive idea of the respective country such as a few unrelated stereographs from each country cannot possibly give. After a person has gone over one of these complete stereoscopic tours with considerable thoroughness, he ever afterwards will have a more vivid and intelligent conception of that country.

For different reasons many persons cannot be induced to take one of the complete larger tours. Such persons should endeavor to obtain as large a portion as possible of the tour that he may be especially interested in. Some of the larger stereoscopic tours are subdivided into small sections on particular localities, such as Jerusalem, Tiberias, Moscow, St. Petersburg, Rome, etc. We strongly emphasize the value of these small educational sets as being indispensable for the traveller and the student, the home and the school.

---

**ARCHIVAL SLEEVES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Case Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDV (3 3/4&quot; X 5 3/4&quot;)</td>
<td>$0.07</td>
<td>$0.70</td>
</tr>
<tr>
<td>CDV POLYESTER (2-mil)</td>
<td>$0.10</td>
<td>$0.90</td>
</tr>
<tr>
<td>POSTCARD (3 3/4&quot; X 5 3/4&quot;)</td>
<td>$0.08</td>
<td>$0.70</td>
</tr>
<tr>
<td>POSTCARD PAGE 4-pocket top load</td>
<td>$0.16</td>
<td>$0.50</td>
</tr>
<tr>
<td>4&quot; x 5&quot; COVER (3 3/4&quot;)</td>
<td>$0.08</td>
<td>$0.70</td>
</tr>
<tr>
<td>STEREO POLYESTER</td>
<td>$0.12</td>
<td>$0.80</td>
</tr>
<tr>
<td>CABINET CONTINENTAL (4 3/4&quot; x 5 3/4&quot;)</td>
<td>$0.10</td>
<td>$0.80</td>
</tr>
<tr>
<td>#10 COVER (4 3/4&quot; X 6 1/4&quot;)</td>
<td>$0.10</td>
<td>$0.45</td>
</tr>
<tr>
<td>5&quot; x 7&quot;</td>
<td>$0.07</td>
<td>$0.25</td>
</tr>
<tr>
<td>BOUDOIR (5 1/2&quot; X 8 1/2&quot;)</td>
<td>$0.05</td>
<td>$0.50</td>
</tr>
<tr>
<td>8&quot; x 10&quot;</td>
<td>$0.05</td>
<td>$0.40</td>
</tr>
<tr>
<td>11&quot; x 14&quot;</td>
<td>$0.03</td>
<td>$0.45</td>
</tr>
<tr>
<td>16&quot; x 20&quot; (unsealed flap)</td>
<td>$0.03</td>
<td>$0.50</td>
</tr>
</tbody>
</table>

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

Underwater Stereo with Class

Review by John Dennis

With the publication of *Under Water - A 3-D Wonderland*, underwater stereography is now represented in a publication as photographically impressive as any flat book claiming to picture the "Depths" and the creatures in it. For nearly twenty years, author J. Hinterbircher has been diving and photographing in the Red Sea and off the Maldive Islands for at least five weeks of every year. He became interested in stereo several years ago, but quickly realized that the lens separation of standard stereo cameras was too wide for the often very close work he did under water.

Over the past ten years, he has built a number of stereo cameras for 24x36mm, 24x24mm, and 18x24mm formats, all with minimum lens spacing for close-up stereo down to a 1:1 subject ratio. Three of the cameras, all using Exakta 35mm reflex bodies, are pictured in the introduction which includes details of their lenses, shutters, viewfinder and film advance mechanisms.

All of the book’s 106 stereo pairs are on the right-side pages, while the informative captions (paragraphs, actually) in English and German are on the facing left-side pages. These reveal exactly what you’re looking at (and what it’s swimming over or crawling on, and what that thing in the background is) without going on about the beauty of the subject or lapsing into poetry. The stereographs truly speak for themselves thanks to the author’s considerable photographic skills and the very high quality of the color printing.

Under a good reading or desk lamp, these views exhibit nearly the brightness and color intensity of transparencies. The large format pairs (each image is three and one-half inches wide) help preserve the impact of the stereos, which are designed to take full advantage of the capabilities of the included

(Continued on page 23)
Tyco Toys has announced that three new "character" View-Master viewers will be released to 3-D fans young and old this summer.

First introduced in 1989, the Mickey Mouse character viewer has since become a major item in the View-Master product line. To a lesser degree, the Big Bird viewer (introduced in 1990) has also seen its share of success. Because of the reception received by these specialty viewers, Tyco is releasing three new viewers depicting three familiar faces.

Casper the Friendly Ghost will play a major part in Tyco marketing this summer. The new Casper movie will be opening on May 31. At the same time, the new Casper viewer will appear on the shelves of most major toy stores. A new Casper SuperShow Projector will be released at the same time. The viewers will be sold individually or as part of a prepackaged gift set, as seen in the photo.

In June, the new Batman Forever movie premiers, and the Batman viewer and gift set will be released in conjunction with that film. This viewer continues a tradition set back in the 1960s with the introduction of the first View-Master Batman packet staring Adam West. Other Batman packets have followed as part of the line ever since.

A popular Power Ranger character will also become the face on a new viewer. You can hardly turn around these days without seeing a Power Ranger T-Shirt, toy, costume, or one of the countless other items on parade in stores throughout the world. View-Master has already introduced two different Power Ranger Packets and hopes to continue their successful sales with the release of the Red Ranger viewer in June.

Collectors can help support View-Master's new manufacturing efforts by grabbing the new viewers when they appear on toy store shelves this summer.
James Esson (1853-1933) was inducted into the City of Cambridge, Ontario Hall of Fame "For his service to photography throughout the world." The inaugural meeting took place at the Cambridge Archives (old City Hall) on February 20th.

Esson was a prolific photographer in 2-D and 3-D throughout the latter part of the 19th century and the early years of the 20th. He is noted for his courage in building one of the most elaborate studios in Canada at a time (1884) when his home-town of Preston (now part of Cambridge) was not given a great reputation for business initiative. His business was highly successful and the ground floor of the studio, known as Esson's Atelier, is still standing. A stash of unidentified photographic paraphernalia had remained in the basement until two years ago when it was unceremoniously loaded into a truck and taken to the dump.

In 1887 an advertisement in the County of Waterloo Gazetteer and Directory announced "James Esson Photographer, Publisher and dealer in Stereoscopic Views, C.D.V. Stat-

In attendance at the inaugural Hall of Fame reception were three descendants: Bill Law, Helen (Law) Ross and Peter Ross to whom James Esson was great uncle, great uncle and great, great uncle respectively. Bill Law and Peter Ross are still practicing photography in Cambridge.

Under Water Stereo with Class

(Continued from page 21)

Added Dimension plastic viewer. The traditional binding is the only thing that interferes at all with easy viewing of the stereos, and using one finger to flatten the pages quickly corrects the problem that a plastic or wire binding would have avoided in the first place.

Besides the use of large format pairs and the same viewer, Under Water shares a misprint with 1992's 3-D Hollywood Photographs by Harold Lloyd, as one stereograph is pseudoscopic. The difference is that unlike 3-D Hollywood publisher Simon & Schuster (who refused to do anything about their book's several pseudo images), Under

Water publisher Wittig Books will include a replacement image with each book.

Under Water gets you up close and personal with sea creatures both familiar and strange. Despite having seen what must add up to a year’s worth of undersea nature films on TV, I can’t recall ever before seeing a sea squirt, for instance. Equally new to me was the iridescent clam that attaches itself in within a crevice of coral and is revealed here as only a good stereograph accomplish.

Under Water -- A 3-D Wonderland is available from Cygnus Graphic, Box 32461, Phoenix, AZ 85064 for $47.95. The price includes book rate shipment within North America. For air rates or other countries, contact Cygnus. In Europe, the book is available directly from the publisher. For price and shipping, contact Rita Wittig Fachbuchverlag, Chemnitzer Strasse 10, D-41836 Hückelhoven, Germany, Fax 49-2433-86356.
Chesapeake Exhibition

The 1st International Chesapeake Stereo Card Exhibition was held in Maryland in October, 1994. Several Society members won prizes for their viewcards as follows: Brandt Rowles, Judges' Choice - Chesapeake Plaque; Bill C. Walton, 2nd Place Chesapeake Plaque and Honorable Mention; Dale Walsh, 3rd Place Chesapeake Plaque; and Donna Reuter, Honorable Mention. Plans are being made for the 2nd Chesapeake Stereo Card Exhibition. Details will be announced in Stereo World.

New Beta Transparency Secretary

Dean R. Jacobowitz of Montville, CT, has taken over the duties of secretary for the Beta Transparency Circuit as of January 1, 1995. Dean has been an avid stereographer for the past thirteen years, beginning with his initiation into the world of 3-D at the tender age of fifteen. He is copy editor at the Chronicle, a small daily newspaper in Willimantic, CT. "I have received so much enjoyment from 3-D photography," Dean reports, "and from sharing my slides with each of you (fellow Beta members). I wish I had joined the society years ago. For some stupid reason, I was afraid to entrust my slides to the Postal Service. I suppose I finally decided to take the risk. After all—and forgive me if I offend you—we are all going to die in the end anyway. Unless I've heard wrong, we can't take our 3-D slides, our money or our loved ones with us. So what's wrong with sending a few slides out once in a while? Look what it brings in return! We get the chance to see places and faces and things and events we'd never see otherwise—and all in breathtaking, lifelike stereo!"

I do not believe I've heard it summarized better. And in eighteen years of Society participation I can report the loss of very few pictures.

We wish to thank outgoing Secretary Larry Moor for his yeoman service as Secretary since 1991. There is no rest for him though, due to the press of other business including preparations for the big NSA/ISU convention in Atlanta.

Feline Print Circuit

The newest regular print circuit is now in its second year of operation and coasting along quite well. Nancy Sobottka, secretary of the Feline Circuit, has a route list of comfortable size to work with. The first year of operation is a time of shake-down, getting acquainted with new members, and filling up the folio boxes with entries. We are told by Nancy that the top vote collector for the inaugural year was John Dennis (that's correct—our stalwart editor) who was awarded the mythical "Royal Oscar the Cat" for his good work.

Milestones

I regret to announce the passing of two long-time veterans of the Alpha Transpareny Circuit.


Frank was a 1938 graduate of Sacred Heart High School in San Francisco and served in the Merchant Marine during World War II. He spent his work years with the City of San Francisco, serving in several capacities during that time, the last as a clerk in the Traffic Court. He began processing black & white film during his teen years and photography remained a lifelong avocation, culminating with a major interest in making stereo views. Frank became a Society member (#624) more than 25 years ago and worked primarily in Realist format. He was a viewcard collector, and his other interests included gardening, cooking, reading, and music. We will miss his entries in the folios, which were always interesting.


Howard was born in Berkeley, CA, and graduated in electrical engineering from the University of California, Berkeley in 1941. He worked for NACA and NASA from 1941 to 1971 at Ames Research Center, Moffett Field, CA, and served in the U.S. Navy from 1944 to 1946, assigned to duty at Ames Research Center. He married Helen Bowman in 1947 and they raised two children.

His father had a darkroom in the basement and he was involved in photography virtually all of his life. He was introduced to stereo in the late 1950s but did not get a stereo camera until 1978, just before leaving on a trip to the orient. He thereupon became a member of the Society (#702) and remained in the Alpha Transparency until recently when he had to cut back on his activities. He had amassed a great deal of stereo equipment and collectibles during that time and he became a master stereographer. He had many other hobbies in which he always exhibited an intense interest—from restoring classic autos to lapidary work to raising orchids. He could build almost anything—even an in-house 500 pipe pipe-organ for his wife. He built stereo equipment when he could not find what he wanted, and kept a permanent 2x2 projection setup in his living room. He devoted over 7000 hours of volunteer work in restoring old trolley cars which are now in operation on the streets of San Jose, CA. We were sorry when he had to forego active folio participation and his passing will leave us all the poorer.
Super Sleuth

Judy Proffitt has reported on the results of "Mystery Folio" 5. For the mystery folios a group of printmakers enter unmarked viewcards and each participant tries to deduce who made each one. Fourteen participants took part in Mystery Folio 5. Craig Daniels of Florence, OR, set a standard as super sleuth in correctly identifying the makers of all thirteen of the other participants' entries after examining them for form and content. We take our hats off to him for setting a record which may be matched but never broken—quite a feat.

Whether it represents a compliment or not is debatable but the entries of Dick Twichell of Rochester, NY, and Bill Patterson of Wesleyville, PA, were correctly identified by each of the other participants making them "Best-known Printmakers", for better or worse.

The next mystery folio encouraged the stereographers to be "dastardly deceptive" in trying to cover up their style and, if they chose, try to make their views look like the work of Brandt Rowles. It is still circulating and I will pass on any noteworthy results when they are reported by Mystery Secretary Judy Proffitt.

1994 Speedy Voting Results

Bill C. Walton, secretary of the Speedy Print Circuits, has reported on voting for 1994. Speedy Alpha is the oldest of the speedy circuits, now in its sixteenth year. Speedy Mike (for black & white stereoprints), now in its second year, only has one folio box traveling.

Here are the leaders.

### Speedy Alpha

<table>
<thead>
<tr>
<th>Member</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis Ellingsen</td>
<td>12</td>
<td>17</td>
<td>15</td>
<td>65</td>
</tr>
<tr>
<td>Craig Daniels</td>
<td>17</td>
<td>9</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Bill Patterson</td>
<td>14</td>
<td>10</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>Robert Kruse</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Ray Bohman</td>
<td>8</td>
<td>10</td>
<td>16</td>
<td>49</td>
</tr>
<tr>
<td>Brandt Rowles</td>
<td>10</td>
<td>6</td>
<td>9</td>
<td>35</td>
</tr>
</tbody>
</table>

### Top Scoring Views

1. "Reflections" by Brandt Rowles
2. "Magic Eye" by Bill Patterson
3. (tie) "Inner Harbor" by Craig Daniels
4. "Rock Climbing" by Dennis Ellingsen

### Speedy Mike

<table>
<thead>
<tr>
<th>Member</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Pierazzi</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Michael Isenberg</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>David Lee</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Brandt Rowles</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Charles Trelman</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Bill C. Walton</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

### Top Scoring Views

1. "Happy Family" by Michael Pierazzi
2. "Beaver Pond" by David Lee
3. "Lyde Creek" by David Thompson.

---

**Explore the World of Stereo Images**

Please enroll me as a member of the National Stereoscopic Association. I understand that my one-year subscription to Stereoworld will begin with the March/April issue of the current year.

- [ ] U.S. membership mailed third class ($26).
- [ ] U.S. membership mailed first class for faster delivery ($38).
- [ ] Foreign membership mailed surface rate, and first class to Canada ($38).
- [ ] Foreign membership mailed international airmail ($56).
- [ ] Send a sample copy ($5.50).

Please make checks payable to the National Stereoscopic Association. Foreign members please remit in U.S. dollars with a Canadian Postal Money order, an International Money Order, or a foreign bank draft on a U.S. bank.

Name: ____________________________

Address: __________________________

City: ____________________________ State: __________ Zip: __________

---

**HASSLE-FREE 3-D**

**WITH THE TECO-NIMSLO CAMERA AND 3-VIEWER**

Use the lightweight auto-exposure camera to make:
- 36 Slide pairs
- Close-ups at 3 distances
- Lenticular Prints

Use the Universal viewer to display:
- Realist and View-Master rollfilm
- Nimslo/Nishika rolls
- Mounted slide pairs

**PRICES:**
- New camera: $145
- Your Nimslo modified: $63
- Close-up attachments:
  - 6", 12", 30" dists (ea) $29
  - Opti-Lite flash: $29
  - Eveready case: $12
  - Teco 3-Viewer: $87

Add $3 shipping per order. Calif. residents add 9% sales tax.

MFD. BY:
TECHNICAL ENTERPRISES
1401 Bonnie Doone
Corona Del Mar, CA 92625
Tel. 714-644-9500

---

**National Stereoscopic Association**

PO Box 14801, Columbus, OH 43214

The Only National Organization Devoted Exclusively To Stereo Photography, Stereoviews, and 3-D Imaging Techniques.
I used to experience endless frustration every time I brought out the View-Master Stereomatic 500 projector and set it up to show on a 40 x 40 screen. There is a great wealth of interesting pictures on View-Master reels but the Stereomatic is incapable of projecting them on a good size screen.

The Stereomatic's major flaw is that it doesn't provide sufficient illumination. In 1953, projectionists and movie technicians asked the question “How much light do you need for proper 3-D projection?” They discovered the answer, “As much as you can possibly get.” Everyone I questioned said that it was impossible to improve the illumination of the Stereomatic. I decided to improve it in every way I could.

First, I installed new polarizers to cut out unnecessary ghosting. Then, I decided to replace the main condenser lenses with higher quality lenses that were also slightly thicker and therefore able to withstand more heat. Harry Poster warned me to be careful not to break the mirrors when changing the condenser lenses. I decided I didn’t need Harry’s advice and proceeded with great skill to break one of the mirrors. Since the silvering was not very good, I decided to replace both mirrors with new ones for maximum reflection. After this was done, I was ready for project X.

The next experiment was to place a 750 watt Halogen bulb in the projector and record the results. As I expected, the projector did not provide adequate cooling. Once two heat-deflecting filters were installed, I discovered that the heat from the bulb was still affecting the film chips. The filters deflected the heat that was carried in the light beam, but the radiating heat from the bulb was still too great. The projected images so far were quite impressive and very brilliant. The projector’s fan was very efficient but just not powerful enough to expel enough heat. I went back to the 500 watt Halogen lamp, which provides the same lumen output, but has a higher color temperature than the CZX bulb. The halogen bulb also provides better cooling than the CZX bulb.

I now had to resort to my emergency plan, Plan 9. This theory speculated that if you could replace the low quality lenses on the Stereomatic with higher quality, faster lenses, you would obtain a brighter picture with greater clarity. First, I had to remove the original lenses so I would be able to test other lenses in the projector. The original lenses are basically glued in place so they had to be pried loose. I was gambling on the chance that I would actually be able to find two matching lenses that would work in the Stereomatic. Once the lenses were removed, I began hunting for two lenses that would fit. After a long search, I found two matching lenses that fit the projector with a focal length of 2.5 inches and a speed of f/1.8. For comparison, the Stereomatic’s standard lenses are 3 inch focal length and f/3. The lenses I found are of even higher quality than those in the Realist 82 projector, whose lenses are 3.5 inches in focal length and f/2.3.

I proceeded to install the lenses, and by trial and error focused and aligned them. I was now ready to test the results.

I invited a couple of 3-D friends over and we selected some of our favorite reels that we had projected many times before. The pictures were no longer dim, but bright and vivid. The clarity of the pictures was amazing and could be compared to the quality of Realist slides. As I suspected, the sharp quality of the View-Master reels had always been there, but the original optics of the Stereomatic were incapable of accurate projection.

All the improvements I had made contributed to the new quality of the projector, but it was the lenses that had really done the trick. With the heat deflecting filters in place, I could project any picture as long as I liked without hurting the film.

Now with the View-Master project completed, I can begin work on a Tru-Vue 3-D projector. Hopefully, this time I won’t break anything.

For more details, contact Chris Perry, 7470 Church St. Suite A, Yucca Valley, CA 92284, (619) 365-0475.
CHERRY PINK INDEX

In the early 1980’s, Clarke E. Leverette of London, Ontario, set out to compile an index to stereographs published by the major American Publishers at the turn of the century. Unfortunately, Mr. Leverette died in 1985 when he was part way through the project.

The Photographic Historical Society of Canada has inherited (very limited number of) remaining folios (the part of the project completed up to Leverette’s death) which are now available for sale. Proceeds will go to support the Canadian Stereoscopic Collection.

The index, the greater part of which relates to boxed sets of stereo cards, comprises 4 supplements: the 1st 200 pages, the 2nd 200 pages, the 3rd 200 pages and the last 160 pages. They are mostly xeroxed copies on pink paper held in Acco folders with metal clips.

While stocks last, they are available at U.S.$100 for the set of 4 supplements, or U.S.$25 per supplement, which includes postage. (The 1st 200 page supplement is not available separately).

Contact: Stan White, Box 833, 7 Scott Ave, St. George, Ontario, Canada N0E 1N0. (519) 448-3514.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 8</td>
<td>Orlando Camera Show, Ramada Inn Central</td>
<td>3200 W. Colonial Dr., Orlando, FL. Contact</td>
<td>Nancy Green, PO Box 11267, Fort Lauderdale, FL 33339, (305) 564-1022.</td>
</tr>
<tr>
<td>April 8-9</td>
<td>Spring Photo Fair, Santa Clara Co. Fairgrounds</td>
<td>San Jose, CA. Contact Photo Fair, PO Box</td>
<td>11936, San Jose, CA 95152, (408) 251-9197.</td>
</tr>
<tr>
<td>April 8-9</td>
<td>Central Iowa Camera Club Swap Meet</td>
<td>Marshalltown Community College, Marshalltown, IA. Contact CIC, Box 253, Albion, IA 50005, (515) 488-2798.</td>
<td></td>
</tr>
<tr>
<td>April 8-9</td>
<td>Detroit Photorama USA, Dearborn Civic Center</td>
<td>Dearborn, MI. Contact Photorama USA, PO Box</td>
<td>11267, Dearborn, MI 48224, (313) 884-2243.</td>
</tr>
<tr>
<td>April 8-9</td>
<td>Ohio Camera Swap, Shatbybrook Armory</td>
<td>Cincinnati, OH. Contact Bill Bond, 8910 Cher-</td>
<td>Dale, NJ 07403, (201) 838-4301.</td>
</tr>
<tr>
<td>April 8-9</td>
<td>Tampa Camera Show, Holiday Inn</td>
<td>111 West Fortunato Blvd., Tampa, FL. Contact</td>
<td>Nancy Green, PO Box 11267, Fort Lauderdale, FL 33339, (305) 564-1022.</td>
</tr>
<tr>
<td>April 9</td>
<td>Second Sunday Camera Show, Firemans Hall Parish Dr., Wayne, NJ. Contact</td>
<td>Second Sunday Camera Show, 25 Leary Ave.,</td>
<td>Bloomington, NJ 07403, (201) 838-4301.</td>
</tr>
<tr>
<td>April 21-23</td>
<td>Stereoscopic Society Annual Convention</td>
<td>Most House Hotel, Harrogate, North Yorkshire,</td>
<td>England. See the item in NewViews or contact Sue &amp; Bernard Makinson, 36 Silverthorn Dr., Hemel Hempstead, Herts HP3 8BX, England, 01442 258805, fax 01442 250266.</td>
</tr>
<tr>
<td>April 22</td>
<td>West Palm Beach Camera Show, Days Inn Turnpike</td>
<td>6255 Okeechobee Blvd., West Palm Beach, FL.</td>
<td>Contact Nancy Green, PO Box 11267, Fort Lauderdale, FL 33339, (305) 564-1022.</td>
</tr>
<tr>
<td>April 22</td>
<td>Oklahoma City Camera Show, Holiday Inn</td>
<td>3555 NW 39th St., Oklahoma City, OK. Contact</td>
<td>Donald Puckett, 1106 Graham Ave. #206, Dallas, TX 75223, (214) 824-1581.</td>
</tr>
<tr>
<td>April 22-23</td>
<td>The Boston Show - Photographeus '95, sponsored by the Photographic</td>
<td>The Boston Show - Photographeus '95, sponsored</td>
<td>by the Photographic Historical Society of New England. Hilcrest Exposition Center, 220 Bear Hill Road, Waltham, MA. Contact PHSHNE c/o Ed Shaw, PO Box 189, West Newton, MA 02165, (617) 965-0807.</td>
</tr>
<tr>
<td>April 23</td>
<td>Burbank Camera Show &amp; Sale, Aeronautical District Lodge</td>
<td>2600 W. Victory Blvd., Burbank, CA. Contact</td>
<td>Anthony at Bargain Camera Shows, PO Box 5332, Santa Monica, CA 90409, (210) 578-7446.</td>
</tr>
<tr>
<td>April 23</td>
<td>Central Oregon Camera Club Swap Meet</td>
<td>Marshfield Community College, Marshfield, IA.</td>
<td>Contact CIC, Box 253, Albion, IA 50005, (515) 488-2798.</td>
</tr>
<tr>
<td>April 23</td>
<td>New York City Camera Show, Park Inn</td>
<td>440 W. 57th St., New York, NY. Contact New</td>
<td>York City Camera Show, 25 Leary Ave., Bloomington, NJ 07403, (201) 838-4301.</td>
</tr>
<tr>
<td>April 23</td>
<td>The New York Antique Photo Show &amp; Sale, Warwick Hotel</td>
<td>65 W. 54th St., New York, NY. Contact Diana</td>
<td>Thompson (201) 395-1195.</td>
</tr>
<tr>
<td>April 29</td>
<td>Riverside Camera Show &amp; Sale, National Guard Armory, Riverside, CA.</td>
<td>Contact Anton at Bargain Camera Shows, PO Box</td>
<td>5332, Santa Monica, CA 90409, (210) 578-7446.</td>
</tr>
<tr>
<td>April 29</td>
<td>The 15th Annual Pacific Northwest Camera and Photographic Sale, Swap</td>
<td>&amp; Show, Kent Commons, Kent, WA. Contact Gary</td>
<td>Silvertson, 4802 93rd Ave. W. Tacoma, WA 98467, (206) 565-9663.</td>
</tr>
<tr>
<td>April 29-30</td>
<td>23rd Cleveland Photorama USA - Used Camera Show</td>
<td>Brook Park Armory, 6225 Engle Rd., Cleveland,</td>
<td>OH. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.</td>
</tr>
<tr>
<td>April 30</td>
<td>NSA SOUTH CENTRAL REGIONAL SPRING MEETING</td>
<td>8:30 am to 2 pm, College Station Conference</td>
<td>Center, College Station, TX. Contact Carroll's Harvey Rd. #13, College Station, 77840, (409) 693-7004.</td>
</tr>
<tr>
<td>April 30</td>
<td>Toronto International Camera Show</td>
<td>Rio Banquet Hall, 2201 Pacific Northwest Camera</td>
<td>and Photographic Sale, Swap &amp; Show, Kent Commons, Kent, WA. Contact Gary Silvertson, 4802 93rd Ave. W. Tacoma, WA 98467, (206) 565-9663.</td>
</tr>
<tr>
<td>April 30</td>
<td>Buena Park Camera Expo, Sequoia Club</td>
<td>Orange Grove Ave., Buena Park, CA. Call (714) 786-6183 or 786-6444.</td>
<td></td>
</tr>
<tr>
<td>April 30</td>
<td>Santa Monica Camera Show &amp; Sale, Santa Monica Civic Auditorium</td>
<td>3900 El Camino, Santa Monica, CA. Call</td>
<td>(310) 397-7446.</td>
</tr>
<tr>
<td>May 4</td>
<td>Camera Exchange Show - Sale, Quality Inn</td>
<td>DeLand, FL. Call Florida Camera Shows, (904)</td>
<td>738-0549.</td>
</tr>
<tr>
<td>May 6-7</td>
<td>7th Semi-Annual Rocky Mountain Regional Camera Show, Regency Hotel</td>
<td>3900 El Cami, Denver, CO. Call David Feely, (303) 399-6965.</td>
<td></td>
</tr>
<tr>
<td>May 7</td>
<td>Atlanta Camera Show &amp; Sale, Holiday Inn</td>
<td>Northwest, 1-75 &amp; Delk Rd., Atlanta, GA. Con-</td>
<td>tact Atlanta Camera Shows, Box 360033, Decatur, GA 30036, (404) 367-2773.</td>
</tr>
<tr>
<td>May 7</td>
<td>South Bend Camera &amp; Computer Swap Meets</td>
<td>Century Center, South Bend, IN. Contact</td>
<td>Roger Smith, 8865 E. Black Point Rd., Syracuse, IN 46567, (219) 856-3863 eve.</td>
</tr>
<tr>
<td>May 14</td>
<td>Second Sunday Camera Show, Firemans Hall Parrish Dr., Wayne, NJ. Con-</td>
<td>Second Sunday Camera Show, 24 Leary Ave., Bloom-</td>
<td>ingdale, NJ 07403, (201) 838-4301.</td>
</tr>
<tr>
<td>May 21</td>
<td>Buena Park Camera Expo (see April 30)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 27</td>
<td>6th Santa Fe Camera Show &amp; Swap Meet</td>
<td>High Mesa Inn, 3347 Cerrillos Rd., Santa Fe,</td>
<td>NM. Contact Lynn Cobb, 15324 Cerrillos Rd., Santa Fe, NM 87105, (505) 899-1101.</td>
</tr>
<tr>
<td>May 28</td>
<td>New York City Camera Show (see April 23)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 28</td>
<td>Albuquerque Camera Show &amp; Swap Meet</td>
<td>Indian Pueblo Cultural Center, 2401 12th N.W. St., Albuquerque, NM. Contact Lynn Cobb, (505) 899-1101.</td>
<td></td>
</tr>
</tbody>
</table>

**Upcoming National NSA Conventions**

1995
- Atlanta, GA: June 27 - July 3

1996
- Rochester, NY: August 1-5

1997
- Bellevue, WA: July 4-6
Correction:

Somewhere in the editing process, three words were dropped from the top line of the center column of the side-bar article on page 21 of Vol. 21 No. 5. The phrase should read: "...why the glasses DID NOT HAVE 'red and blue lenses.'"
For Sale

ARThUR GIRLING’S "Stereo Drawing - A Theory of 3-D Vision and Its Application to Stereo Drawing", 100 pages hardbound 8½ x 12. Stereo photographers are finding that the book applies equally to stereo photography and is a mine of information on methods of making 3-D pictures and viewing them. Written in non-technical language and profusely illustrated with B&W drawings as well as 11 pages of superb anaglyphs, this book is a must for the serious stereocopyist.
Now available from NRA Book Service, 4201 Nagle Rd., Bryan, TX 77801. Price (including postage) $19.00 USA, Canada. Overseas add $2.00 surface, $4.00 air.

ASAHI PENTAX stereo adapter and viewer set, Exc.+ in original box with instructions, $125; Realist ST-41 camera & ST-61 viewer in original combo box, with room for slides after camera is removed. Camera is clean but Exc./Exc., viewer looks Exc.+ but has a few repaired cracks, $145; Niksha camera, like new in torn and repaired original box, with booklets & unboxed Exc.+ eveready case, $60; Niksha camera, like new but missing tiny red lens over battery indicator window, $125; Sawyer's View-Master, $120.

YOURS, your state historical stereo photos, photographs, real photo post cards, documents, medals, engravings and memorabilia. MacDonald's Historical Collection, 1316 NE 113th Ave., Portland, OR 97220-2214.

For Sale


NEW BOOK! STEREOREVIEWS ILLUSTRATED Volume 1: Fifty Early American, full size, full color, KILLER QUALITY duotones, 3-page price guide. See review, Stereo World V21 #2, page 17. $20 postage (worldwide) by Russell Norton, PO Box 1070, New Haven, CT 06504-1070.

Your own, state historical stereo photos, photographs, real photo post cards, documents, medals, engravings and memorabilia. MacDonald's Historical Collection, 1316 NE 113th Ave., Portland, OR 97220-2214.

Trade

REALIST SLIDES for sale or trade - including 1939 New York World's Fair, Cecil B. DeMille silent movies, 1950s Nudes, movie stars. Special high-quality Stereomatic 500 lenses, 2.5 inch, 2½/8. Wanted: Movie related stereoviews and rare Tru-Vue material. This is my correct address and phone number: Chris Perry, 7470 Church St. Apt. 1A, Yucca Valley, CA 92284, (619) 305-0475.

Wanted

ALFRED S. CAMPBELL views of Cleveland, Ohio (1896). Send copies or number and title, condition and price. Gary Peck, 3552 Tuttle Ave., Cleveland, OH 44111.

ALLELEGNY CITY, Pittsburgh, Steel, Turkey, Greece. Michael Chikiris, 539 E. Ohio St., Pitts-burgh, PA 15212, (412) 322-7206.

BROKEN REVERE or Wolensak camera and broken Realist red button viewer wanted to fix mine. Thanks. Arlen Manning, 1546 Estee Ave., Napa, CA 94558, (707) 224-7514.

BUYING STEREORU SLIDE VIEWERS. Any model, any condition. Paying top prices. Examples: Realist DC 85$: Realist AC/Kodaslide I $120. Also: Reversa/Wolensak, TDC, V-M, Brumberger, and more. Contact: G. Themelis, 10243 Echo Hill Dr., Brecksville, OH 44141, phone/fax (216) 838-4752.

C. GOODRICH, Plainfield, Vermont - Stereo views, any condition, for research. Contact Richard Pett, RR 1, Box 1770, Plainfield, VT 05677, (802) 454-7897.


Wanted


COLORADO and New Mexico stereo views, cabinet cards, mounted photos, etc. taken by D.B. Chase. Also xeroxes of the above needed for research. Mark Gardner, Box 879, Cascade, CO 80435.


DOKATA, also ND & SD. Stereos or any format photographs. Need info on photographers for area photo history book. Buy, trade, even Xerox copies for reference. Bob Kolbe, 1301 Go. Duluth, S.F, SD 57165.

FERRIS WHEEL stereo views, photographs, post cards wanted. Also would appreciate photographs for research purposes; photocopying, postage reimbursed. Norman Anderson, PO Box 33211, Raleigh, NC 27636, (919) 787-6926.

FLAT MOUNT VIEWS of Russia, especially those by Russian photographers; will buy or trade. Also want to correspond with anyone interested in such material with a view to an article on it. T.K. Treadwell, 4201 Nagle Rd., Bryan, TX 77801.

FLORIDA STEREOS of historical value, especially Tallahassee, Tampa and Gainesville: Price and describe or send on approval; highest prices paid for pre-1890 views. No St. Augustine. Hendrickson, PO Box 21153, Kennedy Space Center, FL 32815.

HARD HAT DIVER wants stereo views, post cards and other memorabilia of deep sea divers. Paul Schenk, 3500 Bay Area Blvd., Houston, TX 77092, (713) 486-9312.

I BUY ARIZONA PHOTOGRAPHS! Stereoviews, cabinet cards, mounted photographs, RP post cards, albums and photographs taken before 1920. Also interested in Xerographs of Arizona stereographs and photos for research. Will pay postage and copy costs. Jeremy Rowe, 2331 E. Del Rio Dr., Tempe, AZ 85282.

I COLLECT 3-D EQUIPMENT! Stereo cameras, Viewers, and any other 3-D related products, books and videos. Please contact Chang, Chih- HSu, PO Box 42-94, Taipe, Taiwan, R.O.C.

I COLLECT VIEWS OF SAN DIEGO, California in Realist or View-Master format! Contact Dave Weiner, PO Box 12193, La Jolla, CA 92039.

**Autochrome History Documented**

Some of the most impressive amateur stereographs of the early 20th century were in color, taken on Autochrome plates in various format sizes. The process was invented in 1904 by French photographic pioneers Auguste and Louis Lumière. (See SW Vol. 15 No. 1, page 32.)

Recently, what is claimed to be “the only comprehensive scholarly study of the world's first practical color photographic process” has been published under the title *The Art of the Autochrome—The Birth of Color Photography* by photo historian John Wood of McNeese State University. Although flat, 75 exceptional Autochromes by Steiglitz, Steichen, Clarence White and Heinrich Kuhn are reproduced in full color. According to *The Journal* of the Photographic Historical Society of New England, the book is available for $65 from The University of Iowa Press, Publication Order Dept. 100 Oakdale, #M105, Iowa City, IO 52242-5000.

**Naylor Collection Sold**

Many of those attending the 1990 NSA convention in Manchester, NH went on bus excursions to visit Jack Naylor's private, 4,000 square foot photographic museum at his home in Chestnut Hill, MA. The 31,000 cataloged items (from images and cameras to related equipment) owned by NSA member Naylor constituted the world's largest private collection of photographic and contained some unique stereo images, viewers and cameras. (See SW Vol. 17 No. 3, page 27)

The collection is no longer accessible by bus. Citing his lack of immortality, Mr. Naylor made the collection available for sale in 1989 for $4,000,000 on condition that it remain intact. No individuals or institutions in the U.S. expressed interest, and last year the entire collection was purchased by the Japanese government. It will be housed in a public photography museum being constructed in Yokohama. Packed for shipment in 76 wood crates, the collection weighed over 30 tons. Asked how he felt now Mr. Naylor replied, “Empty in one sense but pleased and grateful to know that the collection is in good, caring hands.”

In the meantime, he's started on collection number two and plans to write two major books on photo history.

More details on the collection and its sale (as well as "before & after" photos of the museum) appear in Numbers 142 & 143 of *The Journal* of the Photographic Historical Society of New England, PO Box 189, West Newton, MA 02165.
WANTED: Fine photography and ephemera illustrating social themes, for consignment or purchase. These items brought outstanding prices in our November 1994 sale. Do you have similar material you would like to offer?

Sitting Bull, Cross, $424

Kansas Sod Houses, Conklin & Kleckner, $959

SUBSCRIBE: Catalog published Spring and Fall. Fully illustrated; 950-1000 lots. Stereoviews in many categories (African-Americans, Indians, Judaica, Ethnics/Immigrants, Labor/Occupational, The West, Photographic History.) The Spring 1995 (catalog mailed late April) sale will include at least these:

Wheeler Expedition
Indian views

Judaica, incl. Palestine

Southern Blacks, 1870s and 1880s

Fine Keystone Santa

$20 for 3 issues

American Social History and Social Movements
4025 Saline Street, Pittsburgh PA 15217
(412) 421-5230; (412) 421-0903 fax
New Products from Hewes & Kagan Import & Export

**FED/HK-FCS 300 Projector.** We have Americanized the Ukrainian 220 volt FED projector with a custom transformer and two Halogen 24 volt 150 watt lamps. The result is a nice, compact 5 or 7 perf projector ideal for home use.

**FED BOY Stereo,** an upscale version of the Model M. Changes include tighter spec’s, film speed and focus settings that are harder to move accidentally, and a “B” shutter setting that fires at f5.6 instead of f2.8.

**The SKF-1**
This Ukrainian beamsplitter set uses first surface mirrors. The set includes the beamsplitter and slide viewer assembly. Camera not included.

**The Sputnik**
We are carrying clean used Sputniks for two reasons. They are a reasonably priced way into medium format stereo, and I enjoy mine immensely. In my opinion, you haven’t seen an awesome stereo slide until you’ve seen a medium format stereo slide. These were made in Russia, are fully manual, and use 120 roll film.

For prices, additional products or information, contact either of the following:

Marty Hewes, Hewes & Kagan Import & Export
29W168 Lakeside Drive, Naperville IL 60564
Voice (708) 904-2431  Fax (708) 904-2460
E-Mail martyh@xnet.com

Joel Alpers, Rocky Mountain Memories
2200 Creststone Court, Fort Collins, CO 80525
(303) 223-2097
This Hexagon Grouper is one of the 106 undersea creatures revealed in the large format, color stereo pairs of the new book Under Water - A 3-D Wonderland, reviewed on page 21.