LOCAL

The Chicago Association for Color Research recently re-elected Merle Sweet of Northern Pigment Co., Ltd., Toronto, president of the Association. Oliver J. Lunn, U. S. Color Card Co., is the new vice-president and Albert E. Russell, Jewel Paint and Varnish Co., secretary. At Art Center, four exhibitions were scheduled for November; two of books, one of photographs and one of ceramics. The Second Annual Chicago Color Exposition, sponsored by The Association for Color Research, was held daily (except Sunday) throughout October at Art Center Chicago, 32 West Randolph Street. The exhibition included modern methods of physical and psychological color measurement, important systems of color organization, examples of color photography, lithographic and letterpress color printing, raw pigment materials, works of art, educational and merchandising techniques; and a demonstration based on a Survey of Color Acceptance, its Normal Demands and its Wartime Limitations, embracing a great variety of materials involving color. On each Thursday night a movie short on various phases of color science and application was shown and followed by discussions of the use of color in war years.

In a notice dated October 30, 1942, Professor Michael J. Zigler, Chairman of the Boston Color Group, informed its members after discussions with several "charter" members, that the Group would suspend the regular meetings, perhaps for the duration, or at least until the time for the resumption of meetings seemed ripe. Owing to the war emergency several difficulties had arisen, and the prospect of attendance at meetings and the securing of speakers seemed more difficult. Members who had diverted their research efforts from normal peacetime interests to government service would not be at liberty to discuss their researches publicly. Other members have had to assume additional responsibilities, so that activities eagerly undertaken in peace times have had to be suspended. But in view of past marked interest in the Group's programs and the growth of membership, it was decided to try to keep the members of the Group in touch with one another. For this purpose a committee was appointed to consider suggestions as to when meetings can best be resumed. The committee consists of Professor Frank Allen, Chairman; Dr. S. Q. Duntley, Mr. George Nerney, Mr. Arthur W. Cornell and Mr. Lee W. Court.

The Colorists of Washington and Baltimore met in Washington for dinner at the Arts Club on Monday evening, November 23. Dr. Domina Eberly Spencer told the group what part she thinks mathematics can play in formulating a regular color space to serve as a basis for the study of color harmony. Mr. Greville Ricard of the Office of Civilian Defense will discuss certain problems in civilian camouflage.

CHANGES IN

We are glad to welcome to membership in the Individual Group of the Council, Mr. Frederick T. Simon. Mr. Simon, now with the Army Quartermaster Depot at Philadelphia, Pa., was formerly with the Calco Chemical Company. We are sorry to lose Mrs. Carolyn L. Dewing by resignation.

MEMBERSHIP
More and more ISCC delegates and members are entering active service in the Armed Services of the United States. We mention the following and shall be glad if any unmentioned ones will let us know (if permitted) where they are serving and in what capacity.

Lt. Stanley Backer, War Department, New Orleans, La.
Major F. A. Geldard, War Department, Washington, D. C.
Lt. James J. Glenn, Navy
Major J. P. Guilford, Santa Ana, California
Capt. Frederic H. Rahr, Marine Corps
Private Harry H. Scheid, Air Base Squadron, Colorado Springs, Colo.

The 1943 annual meeting of the Inter-Society Color Council will be held concurrently with the winter meeting of the Optical Society of America in New York City early in March, 1943. Plans are already under way for a Discussion Session to consist of panel discussion by delegates of various member bodies. At the Business Session the Council will receive reports from the chairman of the delegations and from each committee chairman regarding activities during 1942. This year there will be no Popular Session. The Technical Session of the Council, already planned as a discussion of color blindness and color-blindness tests, is being developed into a series of papers that will be presented as a symposium on the program of the Optical Society. This symposium, also one on vision already arranged for the Optical Society program, will interest all ISCC delegates and members. Although there will be no popular session on the ISCC program there will be an evening lecture on the OSA program of interest to ISCC delegates and members, a lecture and demonstration by Ralph M. Evans, chairman of the S.M.P.E. delegates to the ISCC. Mr. Evans will outline and demonstrate the consequences for color photography of lightness constancy, simultaneous contrast and adaptation-level phenomena.

From W. F. Bartoe, delegate to the Council from the A.S.T.M., we have received copies of the six following Tentative Methods of Test for Optical Properties of Plastics developed and approved under Committee D-20 of the American Society for Testing Materials:

D 620 - 41 T, Color Fastness of Plastics to Light, Issued 1941
D 636 - 41 T, Diffusion of Light by Plastics, Issued 1941
D 542 - 40 T, Index of Refraction of Transparent Organic Plastics, Issued 1939, Revised 1940
D 637 - 41 T, Surface Irregularities of Flat Transparent Sheet, Issued 1941
D 672 - 42 T, Haze of Transparent Plastics by Photoelectric Cell, Issued 1942
D 675 - 42 T, Terms and Descriptive Nomenclature of Objects made from Plastics, Issued 1942

Any suggestions for revision of these standards should be addressed to the American Society for Testing Materials, 260 South Broad Street, Philadelphia, Pennsylvania, or to Dr. W. F. Bartoe, Chairman of Sub-committee IV, A.S.T.M. D-20, Box 219, Bristol, Pa.

The Executive Committee of the ISCC met at the Pennsylvania Hotel in New York City on October 31, with only Col. Scott absent (overseas). Among the many matters on which action was taken, in
addition to accepting the above-mentioned membership application, were the discharge with thanks of the Public Relations Committee, decision by the Executive Committee to itself formulate an explicit statement of Council policy; possible publication of the Godlove color bibliography for 1934-42; acceptance of the invitation of the Optical Society of America to meet concurrently with them in February or March, 1943, in New York City, and appointment of committees for the meeting; a possible resolution with respect to publication in newspapers or periodicals of iso-chromatic color-blindness charts, and several other matters. These have been reported in the minutes of the meeting, which were mailed to the chairman of delegates of all member-bodies under date of November 5, 1942.

**MUNSELL**
The first meeting of the Board of Trustees of the Munsell Color Foundation, Inc. was held at the Pennsylvania Hotel in New York City on October 28, 1942. The following Trustees were present: Arthur S. Allen, Blanche R. Bellamy (manager of the Munsell Color Co.), I. H. Godlove, Loyd A. Jones (representing the Optical Society of America), A. E. O. Munsell (representing the donors of the stock of the Munsell Color Co.), and Dorothy Nickerson (nominated by the Inter-Society Color Council). Deane B. Judd was prevented from attending by a railroad obstruction. Charles G. Page, counsel for the Foundation, presided at the meeting. In addition to acting on the legal formalities required by the law of the State of Maryland, by whom a charter was issued, officers were elected, By-laws adopted, and a gift of all of the outstanding capital stock of the Munsell Color Company from Mrs. Juliet E. Orr Munsell was accepted with expressions of appreciation. Several other matters, reported in the minutes of the meeting, were the subject of discussions or resolutions. The officers elected were: Deane B. Judd, President; Loyd A. Jones, Vice-President; and Blanche R. Bellamy, Secretary and Treasurer.

**SPRING**
During October, it was announced by Margaret Hayden Rorke, managing director of The Textile Color Card Association of the United States, that the 1943 Spring Woolen and Rayon color cards have been released to members. Each card contains 36 colors. In accordance with the Association's wartime conservation policy, all colors in these new cards have been passed upon by its Dyestuff Advisory Committee (see News Letter No. 40). Spirited musical themes supply the inspiration, said the announcement, for each of these spring collections. The tone-on-tone groups, called Harmonies in the Woolen Card and Melodies in the Rayon Card, feature light and medium blending colors. Included among the basic color movements are misty air blues, cream, cocoa and light coffee tones; smoky jade and subtle yellowish greens; dusty rose as well as fuchsia and rosy reds, mauve and violets; greenish aqua or sea blues and soft gold and amber tones. Keyed to the more vibrant color scale is the group of Solos highlighted in the Woolen Card. These include brilliant versions of purple, fuchsia, turquoise, chartreuse, emerald, sapphire and patriotic red. Featured in the Rayon Card are Trios, or groups of three contrasting colors, which play up such striking combinations as dahlia rose, chartreuse and royal blue and natural, orange and peacock.

The 1943 Spring Glove Card has also been released by the Association. This contains 15 colors. Among the colors portrayed, which apply to glove leathers as well as fabrics, are important basic tones, as well as pastels and vibrant colors for special fashion promotion. The 15 colors comprise: Cream Blond, Love Pink, Sweetheart Blue, Airman Blue, Dahlia Rose, Magnetic Purple, Fiesta Fuchsia, Liberty Red, Freedom Green, Golden Honey, Silver tone, Turf tan, Golden Tobacco, Town Brown and Bluejacket. Chamois Yellow, while not shown on the card, is mentioned for staple needs.
It was further announced by Mrs. Rorke that 23 colors have been chosen for the 1943 Spring and Summer seasons by The Textile Color Card Association's Millinary Color Committee, representing the felt hat body and straw industries. The colors include 10 chosen from the 1943 Spring Woolen Card, 5 from the 1943 Spring Rayon Card and the following repeated from various previous seasons: Sunniblu, California Sun, Manila Brown, Turftan, Trophy Gold, Strato Grey, Vieille Paille and Burnt. The notation is made that the "burnt" tones, Vieille Paille and Burnt, are for straws only.

OTHER IMPORT-

ANT TCCA

ACTIVITIES

We hope that our readers will bear with us when we have been apparently dilatory in making belated reports of happenings in the color field. A case in point was occasioned by the receipt on September 23, of several important news items concerning the activities of The Textile Color Card Association, Inc., which were designed to cooperate with the Government and the Armed Services in their conservation and other war-necessitated moves. Since on that date copy for News Letter No. 43 was already in the hands of Mimeoform Service in Washington for mimeoforming and distribution, and so the interesting news reaches you rather late. Turning to the news items, we note first a stirring appeal and broadcasted explanation of important color trends in merchandising necessitated by the needs of the Armed Services. For example, browns and tans are especially needed by them, and so the TCCA is cooperating by discouraging the use of these colors. In the 1942 Fall Woolen Colors are presented only "dusty frosted shades in the intermediate and lighter category" with only four colors falling in the "darkened scale" so as to save dyes. "Chemicals are one of the greatest weapons of warfare; chemicals make dye-stuffs; dye-stuffs make colors," says the Association, and adds that colors can be "fashion-right" but also "war-right."

Another news item described a meeting of the Salvage Committee of the Textile Spinning, Weaving and Finishing Industries of Greater New York held on August 6 at the Hotel Roosevelt. The meeting of representatives from these industries was called by Charles Pinnell, general sales manager of the Merrimack Manufacturing Company and President of the Textile Color Card Association. Another item deals with Hosiery Colors for the Women's Auxiliary Corps, announced by the TCCA in cooperation with the office of the Quartermaster General of the United States Army. The WAAC official color, a "warm sunburnt" color will be called Victorious. It will go well with the uniform color of the Corps and with the Association's shoe, bag and glove leather color, Golden Tobacco. Cotton anklets will be in Mosstone or Old Gold. In a release on the shoe-leather colors required by the WPB Conservation Order on Footwear M-217, the WAAC leather color, Golden Tobacco, was deemed so close to the Army's official Army Russet that it would be unnecessary to have both colors. The other official footwear colors are: Town Brown, Turftan, Bluejacket, Black and White. The Association's managing director, Margaret Hayden Rorke, explained the needs of conservation and gave practical information about colors which make harmonious combinations with the official footwear colors. In the broadcast on September 10, she explained that the issuance of the Association's card for the 1943 colors for men's and women's shoes was delayed to make it conform to the WPB regulations and facilitate the greatest cooperation.

Finally, another item deals with the U. S. Army Color Card showing the Official Standardized Shades for Olive Drab, Khaki and Drab Sewing Threads, issued by the TCCA at the request of the Quartermaster General. This is in line with the Association's long-continued policy of cooperating in the standardization of U. S. Government official colors. Besides Shade P (Army Khaki), Shade T (Army Olive Drab, Dark Shade) and Shade U (Army Drab), there are included three varieties of Army Olive Drab (abbreviated O.D., Shades Q, R and S) necessitated by varying uses on cotton, wool, etc.
APTITUDE TEST

We have received from Dr. Dimmick the following summary of the discussion by the Committee on the ISCC Aptitude Test and Color Blindness Test. On Thursday and Friday afternoons the following delegates met and discussed various problems of the two committees: Hardy, Judd, Foss, Paine, Rittler, Nickerson, Macbeth, Murray, Farnsworth, Balinkin, Granville, Zigler, Gage and Dimmick.

The committee on the Color Aptitude test reported that about 225 sets of data had been received from all sources. These results were presented to the Optical Society on Friday by Dr. Dimmick. A new procedure with a limited time of thirty minutes has been proposed and data is now being accumulated with that method. Dr. Dimmick pointed out that the total number of results that have come in is very small compared to the number of test sets that are in the hands of delegates. He urged that more delegates turn in results, particularly with the new procedure. Precise instructions for the new procedure will be available shortly. Attention was called to the fact that the original materials are showing the effect of two years wear and tear. Mr. Foss and Mr. Granville agreed that they would undertake to produce a new set of material between this meeting and the next one, presumably in February. The new series will include one in red, one in green, and one in either blue or yellow. These additions will perform the same function as the colors which they displace, but will meet the objections to the present limited range of colors.

A letter from Dr. Balinkin was read in which he described a development of the test, upon which he has been working. "During the past year we have designed and constructed an apparatus for color matching consisting of two concentric disks with 40 small color chips on each. After the match is made the observer presses a lever and the number of the selected chip is printed on a paper ribbon opposite the chip to be matched. A test of 40 chips can be made in about 15-20 minutes. The mechanical features of the design are rather interesting and with the apparatus now in running order we are planning to make use of it for a number of problems and tests. If this information is of interest to members of the Committee kindly report it at the meeting."

The new materials will be available also for use in the single judgment Color Blindness test being developed by Dr. Hardy's special committee. Discussion at the first session then turned to the work of the latter committee. At the second session a number of points concerning the single judgment test that had come up at the discussion were gone over and decisions concerning them were made. With the present procedure it does not seem possible to interpret the scores strictly as limits, but the committee saw no reason to object to the Navy's so labeling them. A standardized form of the test was decided upon which is to be used in all sets so that all results will be precisely comparable. In this procedure twenty pairs of chips will be presented in a fixed random order which will be the same in all sets. Ordinarily the test will consist of forty judgments, but some experimenters will repeat the test to obtain eighty judgments. For the present, no system of weighting is to be used and the scores will be reported as errors in each series divided by the total errors. No "equal" judgments will be allowed, because of the difficulty which they raise with normal subjects.

Whenever it is possible subjects will be given also an Ishihara, American Optical, and Rabkin test. In addition, Dean Farnsworth has arranged to allow a new test, on which he has been working, to be tried out along with the ISCC test, in order that both his and the Council's work will be as completely coordinated as possible.
The instructions were changed to recommend 50-60 foot candelas illumination in place of the earlier restriction to 10 f.c. Macbeth daylight of 6500-7500 K. is still standard. When sufficient data have been compiled with the latest procedure the committee will meet with its service members for the presentation of these results.

BIBLIOGRAPHY

A. I. Andrews & R. L. Cook; J. Amer. Ceram. Soc. 24, 298-310 (1941); relation of the particle sizes of the frit and color oxides to the color properties of porcelain enamels

Anon.; Chem. Met. Engin. 45, 95 (1938); vitamin A relieves eyes, improves color matching

Anon.; Time, June 10, 1940, p. 53; color feelings (reactions of man, born blind, after he was given sight by an operation)

Anon. (from Bull. C.17 of the Ministry of Home Security, Research and Experiments Dept., London); Chem. & Indus. 60, 551-4 (July 26, 1941); Luminescent materials and their war-time uses

Anon.; Nature 148, 506-7 (1941); nature and measurement of whiteness (Physical Society Color Group discussion by J. G. Holmes, V. G. W. Harrison and C. G. Heys-Hallett)

Anon.; Nature 148, 529 (1941); luminous strontium sulfide (of long life, made by British Luminous Ind. Ltd.)

Anon.; Drug & Cosmetic Indus. 49, 508-9, 518 (1941); civilian morale and cosmetics

Anon.; Drug & Cosmetic Indus. 49, 569 (1941); colored concrete (method of Wilbur & Williams Co., N.Y.)

Anon.; Drug & Cosmetic Indus. 49, 567 (1941); color comparison (note about the Graphic Arts Research Corp. "Comparascope")

Anon.; Paint Manuf. (London) 11, 217 (1941); "what's wrong with camouflage" (brief note)

Anon.; Text. Weekly 28, 521 (1941); through J. Text. Inst. 32, A 574 (1941); photo-electric reflectometer: use for testing opacity of black cloth

Anon.; Paint Manuf. 11, 239-52 (1941); technique of color measurement (review of apparatus for paint trade; 13 illustrations)

Anon.; Text. Colorist 63, 696 (1941); color in safety (from Reader's Digest; see H. Manchester)

Anon.; Nature 148, 698 (1941); new compounds flourescent under X-rays (review of work of F.F. Renwick & H. S. Tasker; Brit. Pat. 540, 252)

Anon.; Chem & Indus. 60, 853-4 (1941); pink into blue (hydrangeas)

Anon.; Paper Trade J. 113, TAPPI Sect., 327-30 (1941); (measuring) brightness of paper

Anon.; Paper Trade J. 113, TAPPI Sect., 331-5 (1941); (measuring) brightness of (paper) pulps
Anon.; Paint Manuf. 11, 239 (1941); the technique of colour measurement

Anon.; Amer. Ink Maker 20, No. 4, 41 (1942); new Hilo (Varnish Corp., Brooklyn, N.Y.) camouflage colors

Anon.; Nature 149, 18 (1942); television in color and stereoscopic relief (demonstration by J. L. Baird)

Anon.; Text. Research 12, 16 (Feb., 1942); cotton changes color (work of Dorothy Nickerson in Agricultural Marketing Administration)

Anon.; Paint & Var. Prod. Mgr. 22, 7-10 (Jan. 1942); blackout paints; concealment paints

Anon.; Paint Var. Prod. Mgr. 22, 34 (Feb. 1942); on camouflage

Anon. Science News Letter, April 11, 1942; p. 230; color blindness improved by treatment with vitamin A (work of K. Dunlap and R. D. Loken -- see preceding issue)

A. J. Arcelaitis; Arch. Neurol. Psychiat. 45, 788-96 (1941); higher visual functions (including recognition of color objects and letters) in each homonymous field following complete section of corpus callosum

A. Auersperg; Z. ges. Neurol. Psychiat. 165, 209-13 (1939); conjugate movements of eyes and visual perception (a short survey)

H. W. Babcock & J. J. Johnson; Astrophys. J. 94, 271; through Nature 149, 114 (Jan. 24, 1942); spectrophotometry of the night sky

T. T. Baker; Camera (Philad.) 62, No. 5, 72-4; No. 6, 68-9 (1941); how to make indirect color transparencies; more about indirect color transparencies


W. W. Barkas; J. Sci. Instr. 19, 26-9 (1942); geared photometer turntable

J. Barker & F. A. Walker; J. Oil & Color Chem. Assoc. 23, 19-28 (1940); fluorescence analysis of pigments and intermediates

C. E. Barnes (to DuPont Co.); U. S. Pat. 2,272,227 (1942); optical resins of predetermined refractive index

C. E. Barnes (to DuPont Co.); U. S. Pat. 2,278,523 (1942); optical body formed of a polymerized base substance of specified composition and which has accurately shaped optical surfaces

C. E. Barnes (to DuPont Co.); U. S. Pat. 2,278,635 (1942); transparent resin of specified composition adapted for optical uses

R. deR Barondes; Med. Rec. NY. 154, 427-8 (1941); Psychol. Abstr. 16, No. 3, March 1942; night blindness: its treatment with vasodilating drugs
G. Barrick; Paint, Oil & Chem Rev. 104, 7-10 (1942); Natl. Paint Var. Lacq. Assoc., Sci. Sect. Circ. No. 629, 437-46 (1941); effect of particle size on the tinting strength of pigments

R. M. Beach & E. A. Robinson (to National Oil Products Co.); U. S. Pat. 2,265,020 (1941); process of decolorizing and deodorizing rosin-free crude fatty-acid compositions

L. P. Eifeldt & M. Griffing; J. Chem. Educ. 19, 282-6 (June); 307-12 (July 1942); color nomenclature in qualitative analysis; T, the Inter-Society Color Council Nomenclature; II, ISCC-NBS color names


J. Bjorksten (to Ditto, Inc.); U. S. Pat. 2,271,112 (1942); hectograph dye composition comprising an alcohol and water-soluble dye subject to fading on exposure to light within the range 3200 to 4000 A. in intimate admixture with anthranilic acid whereby the fading of the dye is substantially retarded

J. N. Bowtell & E. E. Miles; Gen. Elec. Co. J. 11, 256-65 (1941); phosphorescence and its applications

R. O. Boyer; Reader's Digest, Jan. 1940, pp. 102-5 (condensed from The New Yorker); "color nut" (work of R. G. Twyfford)

W. Bradley; J. Soc. Dyers Col. 57, 9 (1941); alkali color-reactions of indigoid and thioidindigoid dyes

W. Bradley; J. Soc. Dyers Col. 58, 2-9 (1942); alkali color-reactions of some anthraquinone-type intermediates and dyes

Bradner & Munso; U. S. Pat. 2,246,501 (1941); glossmeter for measuring gloss of paper

A. A. Brainerd & M. Denning; preprint of paper before Illum. Engin. Soc., Atlanta, Ga.; Sept. 22-5, 1941; 13 pp.; improved vision in machine-tool operations by color contrast (see also Denning & Brainerd)

E. E. Broda; Biochem. J, 35, 960-4 (1941); role of phospholipin in visual purple solutions

E. E. Broda & C. F. Goodeve; Proc. Roy. Soc. A172, 151-9 (1941); Nature 148, 665 (1941); properties of visual purple at low temperatures (absorption spectrum in aqueous glycerol)

M. H. Brode; Brit. J. Photog. 38, 29-30, 51-2, 79-80, 103-4 (1941); bibliography of color photography

W. R. Brode & J. D. Piper; J. Amer. Chem. Soc. 63, 1502-5 (1941); relation between the absorption spectra and the chemical constitution of dyes; XVI, separation of chromophores in unsymmetrical disazo-dyes

J. W. Brooks; U. S. Pat. 2,253,107 (1941); color-index device with superposed rotatable disks
L. Brüninghaus; Compt. rend. 211, 253-6 (1940); new fluorometer

F. Busse (to I. G. Farbenind. A.-G.); Germ. Pat. 702,871 (1941); filter arrangement for copying or enlarging colored pictures

Calco Chemical Co., Inc.; Brit. Pat. 551,766 (1941); fluorescent textile floor covering

G. D. H. Carpenter; Nature 148, 633 (Dec. 6, 1941); criticism of Kalmus' article (Nature, Oct. 11, p. 423) on insect cuticle color; reply by Kalmus, p. 633-4

Z. V. Cherkasova; Zavodskaya Lab. 9, No. 1, 72-4 (1940); optical methods for investigating indigo dyes

C. H. R. Chasney; "The Art of Camouflage"; Forest Hills, N. Y., Transatlantic Arts; pp. 252 (1941)

J. W. Clark (to S. D. Warren Co.); Brit. Pat. 542,492 (1942); increasing the surface gloss of paper

D. C. Cogan; Arch. Ophthal. (NY) 25, 391-400 (1941); ocular phenomena produced by polarized light

D. C. Cogan; Amer. J. Ophthal. 24, 1431-3 (1941); simplified entoptic pupillometer

P. A. Cole & F. S. Brackett; Rev. Sci. Instr. 11, 419-27 (1940); absorption spectra: determination by use of ultraviolet microscope

K. J. W. Craik & M. D. Vernon; Brit. J. Psychol. 32, 62-81 (1941); nature of dark adaptation

K. J. W. Craik & M. D. Vernon; Brit. J. Psychol. 32, 206-30 (1942); perception during dark adaptation

W. J. Crozier & E. Wolf; Biol. Bull. 77, 126-54 (1934); flicker response contour for crayfish

W. J. Crozier & E. Wolf; J. Genl. Physiol. 24, 505-34, 635-54; 25, 89-110, 293-308 (1941); theory and measurement of visual mechanisms; IV, critical intensities for visual flicker, monocular and binocular; V, flash duration and critical intensity for response to flicker; VI, wavelength and flash duration in flicker; VII, flicker response function outside the fovea

A. M. Culler; J. Amer. Med. Assoc. 116, 1349-55 (1941); visual efficiency in industry

W. J. Dann & M. E. Yarbrough; Arch. Ophthal. (NY) 25, 833-8 (1941); dark adaptometer readings of subjects on diet deficient in vitamin-A


M. Denning; Du Pont Mag.; Nov. 1941, pp. 18-20, 24; three-dimensional seeing (use of paint on factory machines)
M. Denning & A. A. Brainard; Product Engin., Jan. 1942, pp. 19-22; color for efficiency (use of paint on factory machines); see also Brainard & Denning

M. Dohrn & H. Nahme (to Sherka Chemical Co.); U. S. Pat. 2,260,173 (1941); composition for protection from the action of sunlight

A. Dooley: Highways & Bridges; July 12, 1939; use of color in concrete roads

D. J. Dow & D. M. Steven; J. Physiol. 100, 256-62 (1941); vitamin-A deficiency and dark adaptation

J. S. Dow; Trans. Illum. Engin. Soc. (London) 5, 121-4 (1941); visibility by white and coloured light

C. L. Dows; Illum. Engin. 37, 103-12 (Feb 1942); Illumination measurements with light-sensitive cells

C. R. Draper; Paint Manuf. 12, 77-8 (Apr. 1942); blackout paints

DuPont Film Manuf. Corp.; Brit. Pat. 544,120 (1942); photographic developing solution containing an aromatic amino color-developing agent and a color former of stated composition

S. Dutt; Allahabad Univ. Studies, Chem. Sect. 1940, 1-13; theory of color on the basis of molecular strain; VIII, color in relation to chemical constitution of organic nitroso and isonitroso compounds

R. E. Eckardt & L. V. Johnson; J. Pediat. 18, 2, 195-9 (1941); comparison of two methods of measuring dark adaptation

H. Etsold (toUniversum-Film A.-G.); Germ. Pat. 702,820 (1941); multiple light filter (composed of dyes)

C. Fader; Amer. Paint J. 26, 22 (Apr. 27, 1942); school colors; see also his cartoons and interesting notes under the title "This Colorful World" in Amer. Paint J. and Amer. Paint & Oil Dealer

J. M. Fain; Indus. Engin. Chem., News Ed. 19, 1252-4 (1941); luminescent paints

J. B. Feldman; Arch. Ophthalm. (NY) 28, 466-71 (1941); light threshold: its clinical evaluation

A. Ferrara; Ann. Ottal. 58, 147-54 (1941); Psychol. Abstr. 15, No. 11, Nov. 1941; visual threshold for blue in youth, old age and aphakia

D. Finlayson (to Celanese Corp. of Amer.); U. S. Pat. 2,272,294 (1942); a white interlining fabric tinted to whiteness by means of a blue dye selected from a specified class and with a blue cotton dye

J. W. Forrest & H. W. Straat (to Bausch & Lomb Optical Co.); U. S. Pat. 2,221,916; color comparator

R. P. Foulds, W. H. Roscoe & J. Bancroft (to Tootal Broadhurst Lee Co.); U. S. Pat. 2,274,863 (1942); equivalent to Brit. 510,083 and French 849,208; process of parchmentizing and delustering cellulosic materials
I - S. C. C. NEWS LETTER NO. 44

November 1942

F. Fritz; Farben-Ztg. 45, 519-20 (1940); weatherproof luminescent colors (pigments)

H. A. Gardner; Paint, Oil & Chem. Rev. 104, 5-6 (Jan. 1, 1942); blackout paints -- concealment paints

H. A. Gardner Laboratory; Amer. Ink Maker 19, No. 7, 43 (1941); new glossmeter

W. Garner; J. Soc. Dyers Col. 58, 65-71 (Apr. 1942); colour matching and colour blindness

B. Gaspar (to Chromogen, Inc.); U. S. Pat. 2,274,782 (1942), equivalent to Brit. 506,385; light-sensitive photographic material comprising a filter dye of specified general formula

E. Gehreke; Physik. Z. 41, 540-3 (1940); phenomena in physiological optics ("optical illusions" showing correlation between visualization of depth and magnitude)

T. A. Geissman; J. Chem. Educ. 18, 108-10 (1941); flower coloration

A. E. Gillam & T. F. West; J. Chem. Soc. 1942, 95-8; absorption spectra of terpenoid compounds; II, iron


H. R. Goodrich & P. L. Anderson; Biol. Bull. 77, 184-91 (1939); variations of color pattern in hybrid goldfish

R. Greenberg & H. Popper; Amer. J. Physiol. 134, 114-8 (1941); demonstration of vitamin-A in retina by fluorescence microscopy

W. F. Grether; J. Expt. Psychol. 28, 419-27 (1941); spectral saturation curves for chimpanzee and man

J. G. Grundy; Proc. Phys. Soc. 54, 1-13 (1942); dye-house: colour-mixing problems

R. B. Hackman; J. Expt. Psychol. 27, 546-58 (1940); experimental study of variability in ocular latency

C. Haig; J. Gen. Physiol 24, 735-51 (1941); course of rod dark adaptation as influenced by intensity and duration of pre-adaptation to light

J. G. Hailwood; Bristol Health Rept. 1939; through Brit. Chem. Abstr. 1941, 1000; defective colour vision

W. C. Halstead; J. Expt. Psychol. 28, 524-8 (1941); Bartley effect in estimation of equivalent brightness

E. Hardy; Med. Rec. (NY) 155, 37-8 (1942); through Psychol. Abstr. 16 (May 1942); reactions of certain flies to colors

N. B. Harman; Brit. Med. J. 1941, part 2, 737; Psychol. Abstr. 16 (Apr. 1942); shamming night blindness
V. G. W. Harrison; Nature 149, 76-7 (Jan. 17, 1942); colour measurement (reply to letter of J. W. Perry, Nature 148, 691; 1941)

V. G. W. Harrison; Proc. Phys. Soc. 54, 86-98 (1942); measurement of near-whites in the paper industry

R. Havemann; Biochem. Z. 306, 224-35 (1940); a new photoelectric colorimeter, II

R. Havemann; Z. physik. Chem. A188, 182-90 (1941); nomenclature of optical processes in colorimetric analyses (discussion of use of "absolute colorimetry" and spectrophotometry)

Heberlein & Co., A.-G.; Brit. Pat. 540,377 (1941); production of dyed patterned effects by means of swelling agents having parchmentizing action

S. Hecht; Nature 149, 40-2 (Jan. 10, 1942); mechanisms of vision (review of symposium on visual mechanisms held at University of Chicago on Sept. 24, 1941; papers by Hecht A. C. Krause, E. Gelhorn, H. Klüver, T. J. Case, S. H. Bartley, S. Polyak, and K. S. Lashley)

S. Hecht; J. Opt. Soc. Amer. 32, 42-9 (1942); the quantum relations of vision

S. Hecht; J. Opt. Soc. Amer. 32, 363 (June 1942); review of Polyak's "The Retina"

S. Hecht & M. H. Pirenne; Science 93, 585-7 (1941); energy and visual threshold

K. Henney; J. Photog. Soc. Amer. 7, 119, 121-2 (1941); the status of color photography

E. Hertel & F. Lebok; Z. physik. Chem. B 47, 315-42 (1940); complete analysis of the absorption spectrum; II, the physical-chemical properties and the electrochemical reduction mechanism of the chromophore groups of nitrosobenzene

E. Hertel & M. Schinzel; Z. physik. Chem. B 48, 289-308 (1941); complete analysis of the absorption spectra; IV, physical-chemical properties of the chromophore groups, azomethine and azomethine-vinylene

W. S. Hill; Rev. electrotéc. 27, 159 (1941); the absorption of fluorescence by a fluorescent liquid

A. Hoch; Ann. Physik 33, 466-94 (1940); absorption spectra of some zinc sulfide phosphors in the excited state

T. R. Hogness & V. R. Potter; spectrometric (spectrophotometric) studies in relation to biology

J. G. Holmes; Proc. Phys. Soc. 54, 81-6 (1942); nature and measurement of whiteness

C. Z. Holub; Brit. Pat. 539, 396 (1941); a fluorescent pigment comprising a fluorescent material and sodium salicylate

P. Honig; Arch. Suikerind. Ned.-Indië 2, 203-4 (1941); seeing of colors and the autonomous nerve system (effect of taste, smell, sound and heat on color vision)

C. R. Hopkins; Arch. Ophthal. (NY) 25, 811-3 (1941); size and location of blind spot of Mariotte as computed from 100 angioscotometric records
M. E. Houston & H. Fletcher; Trans. Kansas Acad. Sci. 43, 309-11 (1940); effect of light and heat on the breaking strength, color and copper number of viscose, cellulose acetate and cuprammonium rayon fabrics

K. J. Howe et al; Off. Digest Fed. Paint Var. Prod. Clubs, No. 212, 9-12 (1942); standardizing paints (and colors) for industrial piping; consolidated report on project No. 8

A. S. Hunter (to E.I. DuPont de Nemours & Co.); U. S. Pat. 2,129,131 (1938); manufacture of pellicles (light filters)

C. Iddings; Amer. Paint J. 26, 62-5 (Apr. 13, 1942); Amer. Paint Oil Dealer 34, No. 8, 18-9 (Apr. 1942); luminous and fluorescent paints

D. Ilse; Proc. Roy. Phil. Soc. Glasgow 65, 68-82 (1940-1); colour vision of insects (lecture)

D. Ilse; (film) Psychological Cinema Register, Bethlehem, Pa.; 1939; 240 feet; $30.00; Psychol. Abstr. 16, No. 3, March 1942; experiments on the color sense of insects: response of bees to blue after training

M. Ives; University Microfilms, Ann Arbor, Mich.; 1938, pp. 134; Psychol. Abstr. 15, No. 3, March 1942; the flight of colors following intense brief stimulation of the eye (microfilm)

E. Jacobson; Paint, Oil Chem. Rev. 103, No. 3, 16-24 (1941); color instead of paint (describes the Ostwald system)

T. L. Jahn & V. J. Wulff; Proc. Soc. Exp. Biol. (NY) 48, 656-60 (1941); 48, 660-5 (1941); retinal pigment distribution in relation to a diurnal rhythm in the compound eye of Dytiscus; influence of a visual diurnal rhythm on flicker response contours of Dytiscus; Psychol. Abstr. 16, April 1942

A. Jaumann; Kunstseide u. Zellwolle 22, 326-34 (1940); the optical appearance of textiles, particularly of rayon and staple fiber (general on light, color, dyes and textures)

P. C. Jeans, E. L. Blanchard & F. E. Setterthwait; J. Pediat. 13, 170-93 (1941); studies with biophotometer, dark adaptation and vitamin-A

H. W. Josephs, M. Beber & H. Conn; Johns Hopkins Hosp. Bull. 68, 375-87 (1941); vitamin-A; relation of blood level and adaptation to dim light to diet

E. Justin-Mueller; Bull. soc. chim. 7, 948-54 (1940); colored hydrocarbons and coloring materials (discussion of color theory)

P. Katheder; Kolloid., Z. 92, 299-324 (1940); fluorescence of monomethine cyanine dyes, especially reversibly polymeric monomethine cyanines

J. D. Kendall; Brit. Pat. 542,149 (1941); aryl hydroxy pyrazole derivatives are used as color formers in films

L. B. Kilgore (to Kilgore Development Corp.); U. S. Pat. 2,276,204 (1942); light-filtering composition of stated constitution
A. von Kiss & G. Auer; Z. physik. Chem. A 189, 344-63 (1941); light absorption and constitution of organic compounds; I, analysis of the extinction curves of aromatic Schiff's bases

A. von Kiss & E. Major; Z. physik. Chem. A 189, 364-72 (1941); light absorption of cobalt thiosulfate solutions

Kodak Ltd.; Brit. Pats. 539,100 and 540,727 (1941); color-photographic processes

Kodak Ltd.; Brit. Pat. 542,006 (1941); fluorescent paint comprising dispersed chrysene

R. A. Koenig & C. R. Johnson; J. Biol. Chem. 142, 233-3 (1942); spectrophotometric determination of iron; I, use of mercaptoacetic acid

M. A. Konstantinova-Shlezinger; Zavodskaya Lab. 3, 957-62 (1939); through Khim. Referat. Zhur. 1940, No. 3, 49-50 and Chem. Abst. 36, 2223-4 (1942); luminescence analysis and its applications

C. M. Koon & D. D. Niemeyer; Paper Trade J. 114, TAPPI Sect., 42-5 (1942); influence of certain variables in forming brightness handsheets (for measuring the color of bleached sulfite wood pulps)

P. P. Lazarev & Z. V. Bulanova; Compt. rend. Acad. Sci. URSS 29, 372-5 (1940); fluctuations in peripheral vision

R. Lecuir; Compt. rend. 211, 390-2 (1940); the agreement in structure of plastics and glazes with their decorative aspect

E. Leitz G. m. b. H.; Gem. Pat. 681,940 (1939); microphotometer

G. M. Lewis, D. Lipkin & T. T. Magel; J. Amer. Chem. Soc. 63, 3005-13 (1941); dyes in rigid media: phosphorescent state

R. Livingston; J. Phys. Chem. 45, 1312-20 (1941); chlorophyll: reversible bleaching by light

G. F. Lothian; J. Soc. Chem. Ind. 61, 58-60 (Apr. 1942); photoelectric fluorimeters and their uses

M. Luckiesh & F. K. Moss; Arch. Ophthal. (NY) 25, 576-81 (1941); characteristics of sensitometric refraction

E. Ludvigh; Arch. Ophthal. (NY) 25, 469-74 (1941); effect of reduced contrast on visual acuity as measured with Snellen test letters

D. L. MacAdam; J. Opt. Soc. Amer. 32, 247-74 (May 1942); visual sensitivities to color differences in daylight

A. Mani; Proc. Indian Acad. Sci. 15A, 52-64 (1942); fluorescence, absorption and scattering of light in ruby

E. Mauldin; Text. World 92, No. 5, 86-9 (May 1942); fluorescent lighting

P. Moon; J. Opt. Soc. Amer. 32, 348-62 (June 1942); a system of photometric units

J. Moon; J. Opt. Soc. Amer. 32, 238-42 (April 1942); reflection factors of floor materials

P. Moon; J. Opt. Soc. Amer. 32, 243-6 (April 1942); reflection factors of some materials used in school rooms

P. Moon; J. Opt. Soc. Amer. 32, 293-8 (May 1942); colors of furniture

P. Moon; J. Opt. Soc. Amer. 32, 401 (July 1942); reply to Faber Birren (see the letter of the latter)

H. Newman & E. Fletcher; Amer. J. Med. Sci. 202, 723-31 (1941); effect of alcohol on vision

New York Paint & Var. Prod. Club; Paint Manuf. 12, 133-6 (July 1942); luminous coatings

D. Nickerson; Proc. Soil Sci. Soc. Amer. 6, 392-3; 1941 (1942); color standards and color names for soils

J. Otuka & T. Honda; Acta Soc. apthal. jap. 44, 2253-9 (1940); Psychol. Abstr., April 1942; relation between visual acuity and contrast under several light intensities

J. W. Perry; Nature 149, 553 (May 16, 1942); colour measurement

S. L. Polvak; "The Retina; the Anatomy and the Histology of the Retina in Man, Ape and Monkey, including the Consideration of Visual Functions, the History of Physiological Optics and the Histological Laboratory Technique"; 607 pp, 100 figs.; Univ. of Chicago Press, Chicago (1941)

G. von Poser & M. P. Schmidt; U. S. Pat. 2,281,895 (1942); light-sensitive material consisting of a sheet support carrying a colored layer which layer changes "shade" on exposure to light wherein the layer comprises a dye and a sensitizer

W. C. Raffé; J. Dec. Art 62, 736-40 (1942); the camouflage of buildings (contd.)

P. Ramart-Lucas (Mme.); Compt. rend., 213, 244-6 (1941); colored tautomeric forms in the benzaurin, phenolphthalein and phenolsulphone-phthalein series

P. Ramart-Lucas (Mme.); Compt. rend., 213, 67-9 (1941); structure and absorption of hydroxylic dyes derived from triphenylmethane; tautomerism of the benzaurins and phthaleins

F. F. Remwick & H. S. Tasker; see Anon.

L. Resnick; "Eye Hazards in Industry"; Columbia Univ. Press, New York (1942); $3.50

C. W. Reynolds; Chem. & Indus. 61, 205-6 (May 2, 1942); modern trends in dry colour (pigment) manufacture

Riggs Optical Co.; Ten Years of Optical Developments; Chicago; 1941; pp. 379; $2.50; see Psychol. Abstr. 16, No. 3, March 1942

C. J. Rodden; J. Research Natl. Bur. Stand. 28, 265-77 (March 1942); R. P. 1456; spectrophotometric determination of dysprosium, holmium, erbium, thulium and ytterbium

G. T. Schmidling; Amer. Ink-Maker 20, 25-30 (May 1942); phosphorescent inks

A. H. Schwichtenberg (Randolph Field); Arch. Ophthal. 27, No. 5, 387-93 (May 1942); review of color vision, with some practical suggestions for medical examiners

J. Segal; J. Psychol. norm. path. 36, 451-539 (1939); Psychol. Abstr. 15, No. 3, March 1942; mechanism of vision in intermittent illumination

C. Sheard; J. Opt. Soc. Amer. 31, 757 (1941) (abstr.); rod and cone dark adaptation; surveys of normal subjects and applications to clinical problems

S. Shlaer, E. L. Smith & A. M. Chase; J. Gen. Physiol. 25, 553-69 (1942); visual acuity and illumination in different spectral regions

W. A. Shurcliff; J. Opt. Soc. Amer. 32, 222-33 (April 1942); logarithm-of-wavelength scale for use in absorption spectrophotometry

D. E. Spencer; J. Opt. Soc. Amer. 32, 274-81 (May 1942); calculation of illumination from triangular sources

Standard Oil Development Co.; Brit. Pat. 513,420 (1942); improvement of color and stability of iso-olefine polymers

E. I. Stearns; J. Opt. Soc. Amer. 32, 282-4 (May 1942); phototropic dyes

D. Stephens; Paint Manuf. 12, 68-71 (Apr. 1942); machine painting for welfare and production

M. A. Tinker; Amer. J. Psychol. 54, 559-63 (1941); effect of visual adaptation upon intensity of light preferred for reading

V. Tullsen; Amer. Ink-Maker 20, 29-30 (May 1942); particle size and shape; their effect on the optical properties of ink pigments (masstone, undertone, opacity, tinting strength and bronze)

F. and A. Urbach; J. Opt. Soc. Amer. 31, 581-7 (1941); studies on the characteristic curve of photographic papers


W. R. Van Voorhis; University Microfilms, 1942; Ann Arbor, Mich.; pp. 116; $1.45; Psychol. Abstr. 16, May 1942; improvement of space perception ability by training (microfilm)
R. B. Woodward; J. Amer. Chem. Soc. 64, 72-5, 76-7 (1942); structure and absorption spectra; III, normal conjugated dienes; IV, alpha-beta-unsaturated ketones

M. E. Yarbrough & W. J. Dann; J. Nutrition 22, 597-607 (1941); dark adaptometer and blood-vitamin-A measurements in North Carolina nutrition survey

S. Yudkin; Brit. J. Ophthal. 25, 231-6 (1941); new dark-adaptation tester

S. Yudkin; Lancet 241, 787-91 (1941); vitamin-A and dark adaptation; effect of alcohol, benzadrine and vitamin-C

A. N. Zaidel & Y. I. Larionov; Bull. acad. sci. URSS., Ser. phys. 4, 25-8 (1940); absorption and fluorescence of solutions of cerium and praseodymium salts

H. Zeishold (translator); Iconoscopic Studies by Wilhelm Ostwald; I, microscopic identification of homogenous binding mediums; Technical Studies 4, No. 3, Jan. 1936

Zeiss Ikon Akt.-Ges.; Germ. Pat. 700,121 (1940); polarizing filter (made of dichroic crystals)

INDEX OF SPECIAL ARTICLES

In News Letter No. 34 a list was given of special articles that had appeared in the first seven and a half years existence of the News Letter. Below we continue this index from News Letter No. 35, May 1941, through News Letter No. 44, November 1942.

No. 35 (May 1941)

PHYSICAL SOCIETY COLOR GROUP
AMERICAN CERAMIC SOCIETY—INTER-SOCIETY COLOR COUNCIL SYMPOSIUM
CONFERENCE ON COLOR (SHEATHON COLLEGE)
COLOR APPTITUDE TEST AND GRAY PAINT STANDARD
MUNSHELL PAPERS IN 40 HUES
CSTALD FABRICREN-ATLAS TO BE MEASURED
CHILDREN, TOYS, AND COLOR (FLORENCE EATCH)
THE STORY OF COLOR (BIRREN)
COLOR WORK IN GERMANY AND RUSSIA
PSYCHOMETER DEMONSTRATION (L.M. HUNION)
COLOR IN FASHIONS FOR MEN (TAYEPPERT)
COLOR IN PAINTING THROUGH THE AGES, VIII (GOOLVE)
COLOR TERMS

No. 36 (July 1941)

OHIO STATE CONFERENCE ON VISUAL PROBLEMS
RECOMMENDED COMMERCIAL STANDARD FOR ARTISTS' OIL PAINTS
COLOR HARMONY ACCORDING TO CSTALD (BIRREN)
CLEARING HOUSE FUNCTION OF THE COUNCIL
COLOR HARMONY AND COLOR SYSTEMS
COLOR AND CLOTHES MAKE THE MAN (TAYEPPERT)
MILITARY PSYCHOLOGY
COLOR IN PAINTING THROUGH THE AGES, IX (GOOLVE)
BLACK AND WHITE (DURICK, JUDD)
BIBLIOGRAPHY (4 PAGES)

No. 37 (September 1941)

ISCC-NBS COLOR NAMES (HICKERSON AND NEWMALL)
NEW YORK COLOR ASSOCIATES FORUM
CONFERENCE ON PROTECTIVE AND BLACKOUT LIGHTING
LIGHTING SECRETS OF "FANTASIA" (BARRIT)
COLOR EXHIBIT AT STAMP COLLECTOR'S MEETING (DECK)
COLOR AND ITS OBJECTIVE MEASUREMENT (KRAEMHENDLE)
BIBLIOGRAPHY ON CAMOUFLAGE (GRACE H. FULLER)
TECHNICAL PROBLEMS OF KODACHROME EXPOSURE (HASKELL)
FATIGUE OF TRUCK DRIVERS
COMPARoscope FOR COLOR MATCHING
THE DU PONT COLOR SECTOR
THE PRACTICAL ART OF COLOR MATCHING (REVIEW OF PEACOCK'S ARTICLES)
COLOR IN PAINTING THROUGH THE AGES, X (GOOLVE)
ART OF COLOR AND DESIGN (REVIEW OF GRAVES' BOOK)
BIBLIOGRAPHY (20 PAGES)

No. 38 (November 1941)

STANDARDS FOR ARTISTS' OIL PAINTS
NEW I.E.S. REPORT
TIME'S VERSE ON COLOR
ISCC-NBS NAMES FOR SOLUTIONS (KELLY)
SOIL-COLOR STANDARDS AVAILABLE
ARTHUR S. ALLEN COLOR CLASSES
BRITISH STANDARD FOR ARTIFICIAL DAYLIGHTING
COLOR PAPERS AT I.E.S. MEETING
NO. 41 - CONT'D.

COLOR IN PAINTING THROUGH THE AGES, XIII (GODLOVE)

BIBLIOGRAPHY AND PATENT (12 PAGES)

No. 43 (September 1942)

A.S.A. 244 STANDARD

MUNSHELL COLOR FOUNDATION

STANDARD ILLUMINANTS FOR TEXTILE COLOR MATCHING (AATCC)

VITAMIN A AND COLOR BLINDNESS (DINWICK)

GLENN MUNSELL

COLOR RULE

COLOR ON VITAMINS (YUDKIN)

FROM ENGLAND (CORRESPONDENCE)

EARLY PATENT ON CAMOUFLAG (ENGLIS)

C.1. PINEO (OBITUARY)

ISCC-NBS COLOR NAMES

VISION: A SYMPOSIUM, PAPERS AND BOOKS

COLOR HARMONY INDEX AND MANUAL (JACOBSEN)

ORIGINS OF GRAPHIC ART (APES AND ART)

BLACKOUT INFORMATION AND BRIGHTNESS METERS (TAYLOR)

COLOR AND NOD (ODDOERT, KARWOSKI & ECKERSON; KARWOSKI)

THE COLOR-BLIND POET (KELLY)

COLOR BLINDNESS TESTS

BIRREN ARTICLES

SOIL-COLOR (NICKERSON)

COLOR IN PAINTING THROUGH THE AGES, XIV (GODLOVE)

No. 44 (November 1942)

NEW A.S.T.M. STANDARDS

MUNSHELL COLOR FOUNDATION

SPRING COLOREAS

OTHER IMPORTANT TCCA ACTIVITIES

APTITUDE TEST AND COLOR BLINDNESS TEST

BIBLIOGRAPHY (11 PAGES)

---

19. November 1942

NO. 41 - CONT'D.

COLOR IN PAINTING THROUGH THE AGES, XIII (GODLOVE)

BIBLIOGRAPHY AND PATENTS (12 PAGES)

No. 43 (September 1942)

A.S.A. 244 STANDARD

MUNSHELL COLOR FOUNDATION

STANDARD ILLUMINANTS FOR TEXTILE COLOR MATCHING (AATCC)

VITAMIN A AND COLOR BLINDNESS (DINWICK)

GLENN MUNSELL

COLOR RULE

COLOR ON VITAMINS (YUDKIN)

FROM ENGLAND (CORRESPONDENCE)

EARLY PATENT ON CAMOUFLAGE (ENGLIS)

C.1. PINEO (OBITUARY)

ISCC-NBS COLOR NAMES

VISION: A SYMPOSIUM, PAPERS AND BOOKS

COLOR HARMONY INDEX AND MANUAL (JACOBSEN)

ORIGINS OF GRAPHIC ART (APES AND ART)

BLACKOUT INFORMATION AND BRIGHTNESS METERS (TAYLOR)

COLOR AND NOD (ODDOERT, KARWOSKI & ECKERSON; KARWOSKI)

THE COLOR-BLIND POET (KELLY)

COLOR BLINDNESS TESTS

BIRREN ARTICLES

SOIL-COLOR (NICKERSON)

COLOR IN PAINTING THROUGH THE AGES, XIV (GODLOVE)

No. 44 (November 1942)

NEW A.S.T.M. STANDARDS

MUNSHELL COLOR FOUNDATION

SPRING COLOREAS

OTHER IMPORTANT TCCA ACTIVITIES

APTITUDE TEST AND COLOR BLINDNESS TEST

BIBLIOGRAPHY (11 PAGES)
INSECTS  The following bibliography on the reactions to colors was gathered by Dr. Judd, who states that it was based largely on the paper by E. Hardy, the last below. Dr. Judd relied on Hardy for the brief summaries of most of the articles cited.

E. Hardy, Lancet 240, 435 (1941), Entomologist's Magazine, London (1941). Musca domestica (housefly) and Fannia canicularis avoid a pale yellow whenever they have a choice. White is preferred.

V. B. Wigglesworth, Principles of Insect Physiology, London, 114-20 (1939), Color vision exists in Fannia (genus containing the lesser housefly) and other insects. Reflex responses of Drosophila (fruit fly) to a striped pattern moved in front of it was due to luminosity, not color.

P. R. Awati, Indian J. Med. Research 7, (3), 548 (1920). Yellow has the greatest attraction for house flies, red and violet the least. Both colored lights at night and colored tanglefoot papers by day were used.

G. C. Lodge, Bull. Ent. Research 9, (2), 141 (1918). House flies show no color preference either in the case of foods, colored lights, or colored fabrics. The sense of smell governs responses more than the sense of sight.

S. B. Freeborn & L. J. Berry, J. Econ. Ent. 28, 913 (1935). Pale colors, including white, are distinctly more repellant to the house fly than the intermediate ones, which included aluminum, the darkest one being obviously the most attractive.


R. Newstead, Preliminary report on the habits, life-cycle and breeding places of the common house fly Musca domestica Linn. as observed in Liverpool, second interim report, 1909. The green-bottle fly objects to blue, pale violet, dark brown and lemon yellow distinctly, and also to a lesser degree to clear green. Azure color was much frequented, and it also exhibited a liking for rose, red, clear green (?) and clear yellow. It also preferred light colors to dark colors.

E. Hardy, Horse 2, (35), 169 (1936). In Holland, stables and cow stalls are sometimes treated with a washing blue inside to avoid fly-trouble and a few years ago those German government stables all dark blue inside were without the usual fly trouble.

G. H. F. Nuttall & A. E. Shiple, J. Hygiene 2, 58 (1902); also E. H. F. Nuttall, Brit. Med. J. (2), 668 (1901). The
common European malaria-bearing mosquito Anopheles maculipennis Mg. alighted on the fabric-colors in the following order of favor: navy blue, 108; dark red, 90; brown, 81; scarlet, 50; black, 49; slate gray, 31; olive green, 24; violet, 18; leaf green, 17; blue, 14; pearl gray, 9; pale green, 4; light blue, 3; ochre, 2; white, 2; orange, 1; and yellow, 0. (The U. S. Army subsequently to this report withdrew its regulation navy blue shirts and issued light ones for use in malarial districts.)

Sheriff, The Times 20; iv. (1932). During five years in South Africa it was found that pink or yellow mosquito curtains never harbored mosquitoes in their folds, and with boxes lined with navy blue, pink, gray, and yellow flannel, the interiors of the blue and gray boxes were thickly covered with mosquitoes, while but two or three were found in the pink or yellow.

Hoodless, London Observer 26, ix 91933); New Caledonia mosquitoes prefer blue and white, avoid yellow.

L. M. Bertholf, Z. vergl. Physiol. 18, 32 (1932); F. E. Lutz, Ann. New York Acad. Sci. 29, 131 (1924); F. E. Lutz & E. N. Grisewood, Amer. Mus. Novit., no. 706, 1 (1934). Drosophila will respond to light of wavelength 257 μm. Most insects are sensitive to ultraviolet, but not to deep red. Maximal attraction for Drosophila for a given radiant emittance is at wavelength 487; for Calliphora, the blue-bottle blow fly this attraction is at wavelength 504 μm. Insects attracted to light seem to perceive ultraviolet better than other parts of the spectrum, but the luminosity of various parts appears to be different with different insects.

Z. Zakarian, Color vision in the house fly (Musca Domestica), J. Opt. Soc. Amer. 23, 195 (1933). Flies prefer white and lightest tints of all hues, white and cream being equally preferred. There is no evidence of color vision, the preference being according to luminosity alone.


E. Hardy, reactions of Certain Flies to Colors, Medical Record 155, 87 (Feb. 4, 1942). A summary for houseflies, fruit flies, green-bottle flies, and mosquitoes, with a bibliography of 18 titles.

To the above references contributed by Dr. Judd, the Editor may add reference to a paper by the late Prof. F. K. Richtmyer, J. Opt. Soc. Amer. 7, 151-58 (1923), entitled "The Reflection of Ultraviolet by Flowers." After asking the question what part, if any, is played by ultraviolet light in attracting insects to flowers, the author gives one or two observations of his and Dr. F. E. Lutz' and in a footnote (p. 152) writes: "A very large number of papers - one authority states 5000 - has been written on the vision of insects and its relation to flowers." In this footnote he gives a half dozen references.