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# INTER-SOCIETY COLOR COUNCIL

## NEWS LETTER No. 73

NOVEMBER, 1947

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### SEVENTEENTH ANNUAL I-S.C.C. MEETING

The 17th annual meeting of the Inter-Society Color Council is to be held on March 2 and 3, 1948, in New York City at the Hotel Pennsylvania. The program on March 2 will consist of a Discussion Session at which subcommittees of the Problems Committee will present progress reports of the projects on which they are working, these reports to be open for general discussion. A Business Session will be held at the close of the afternoon meeting. On March 3 the program will be devoted to a series of eight talks on "How Industrial Color Coordination Is Accomplished." The speakers are professional color consultants drawn from Council membership. They will discuss actual case histories of industrial color coordination. Full details of the program will appear in the next News Letter. Meanwhile we suggest that reservations for rooms be made early and directly to the attention of Mr. Frank Morse, Front Office Manager, Hotel Pennsylvania, mentioning the Inter-Society Color Council. The hotel is setting aside a number of rooms for arrivals on March 1. (We might mention for those who are undecided about arrival time, that Tuesday is one of the hotel's busiest days and therefore the hardest for which to guarantee rooms.)

### NEW INDIVIDUAL MEMBERS

We are glad to welcome the following individual members whose applications were approved by the Executive Committee on October 22:

George Birkel, Jr., Raleigh, N. C., who is interested in "Any research which may be studied in the form of charts or geometric or other specifically regulated forms which will give data useful in study of 'classes' (math.)";

Guy Brink, Pasadena, California, who is chairman of the local I. E. S. Committee on Residential Illumination, and whose work deals principally with industrial and interior decorating;

H. P. Gage, Corning, N. Y., well known to most ISCC members, who is now retired from Corning Glass Works and is interested chiefly in development of Daylite Glass, standardization of railway signal colors and signal colors for highway, marine and aviation purposes; also any development of glass color filters for scientific purposes;



M. A. Grogel, Packaging and Research Institute, Chicago, Illinois, whose work deals principally with design and test of packagings;

George E. McDonough, New York City, whose color studies are aimed principally at color in painting, research on color harmony and on natural laws of color having visual significance;

Sigmund Olesky, Bayonne, N. J., interested in description, specification and standardization of color names in the paint industry;

Frank J. Rizzo, Philadelphia Quartermaster Depot, Philadelphia, Pa., whose problems deal with woven textiles, color application, viewing and illumination in connection with color matching, spectral characteristics in the ultraviolet, visual and infra-red ranges;

Alfredo J. Rosiano, Buenos Aires, whose color interest is chiefly color in cinematography; and

Enid Spidell, Pratt Institute, Brooklyn, whose chief interests are color theory and color use.

LOCAL COLORISTS' MEETINGS AND MR. G. F. WILSON Besides the local-group meetings reported in the following paragraph, we understand that the California Color Society held a regular monthly meeting on Thursday, September 25, to hear Hilaire Hiler talk on color, and again on Thursday, October 30, to hear another well known artist, S. Macdonald Wright, give an informal talk on "Reconsiderations on Color."

At the moment of composing this paragraph, it looks as if the first meeting of each of the three local groups in the East will shortly have had the same speaker: Mr. Robert F. Wilson, Art Director of the British Colour Council, who has been in this country this fall to consult with colorists, industrialists, merchandisers and the applied-arts and fashion authorities in general, in order to establish a close liaison between the British Colour Council and subscribers to its service and other color workers in the United States. Mr. Wilson has many qualifications for this work. He had with him much display material, including a number of publications of his organization. On October 27 he spoke to the Boston Color Group, the announced subject being The British Colour Council color system as compared with the Munsell and Ostwald systems. Mrs. Helen Taylor arranged for him to meet with the Fashion Group in Philadelphia on November 3. On November 5 he met with the Washington and Baltimore Colorists who had a chance to see his exhibit material and discuss a number of matters with him. On November 11 he met with the New York Color Group at the Architectural League. Since Mr. Wilson was also in Cincinnati during the meetings of the Optical Society of America, he has been able to meet a great many color workers in the scientific, technical and design fields in this country.

Mr. Wilson has a wide interest in fashion colors and had with him many of the current and wartime color materials published in Germany and Italy, as well as that brought over to illustrate the work of his own organization. (To our readers we should explain that the British Colour Council is not organized like our Inter-Society Color Council, but rather is more like The Textile Color Card Association of the United States, Inc., an original member-body of the I.-S. C. C.) Mr. Wilson's visit was greatly enjoyed by many of our people, and we hope that it has been a pleasant one for him as well.



Arrangements for having Mr. Wilson appear before the several local color groups were made through Mr. Joseph P. Gaugler of Color Helm, Inc., whose company is headquarters in the United States for the British Colour Council. The Editor wishes to thank Mr. Gaugler as well as Mr. Wilford S. Conrow, another well known artist member, who acted promptly and efficiently to gather together various art interests around New York City to hear Mr. Wilson and to provide places of meeting and entertainment.

DR. BALINKIN  
HOST TO  
EXECUTIVE  
COMMITTEE

The Executive Committee of the I-S. C. C. met at the University of Cincinnati on October 22. Application for membership of the American Oil Chemists' Society was received and a letter ballot, as required by the Articles of Organization and Procedure, was authorized. Nine individual membership applications were approved. Mr. Proctor Thomson was appointed a member of the subcommittee on Problem No. 14; and committee reports were received. (A note regarding program committee activities appears in the first item in this issue.)

During the day the committee recessed to visit Dr. Balinkin's laboratory at the University where they saw a number of the teaching gadgets about which LIFE carried a story in their October 13 issue. About this article we heard an amusing story: The day after it appeared Dr. Balinkin thought his first demonstration class seemed to be on the verge of laughter, but he could not tell what it was about. About halfway through the lecture he looked over the front of the demonstration table and found a sign which read: "As advertised in LIFE!" (But the committee members saw something of student approval, for as they left after a demonstration of a particularly interesting wave-motion gadget in a study hall which was visited, they heard the students applaud.) One of the things of particular interest was the geometrical model of color space used recently as a basis for selection of colors for painting a housing project; and it was a pleasure to meet the student assistant who has been spending full time on this work. After lunch at the Faculty Club the committee visited the School of Applied Arts where Dean Pickering took them through a brief tour of the school. In the afternoon came a trip to the Cambridge Tile Company, long interested in problems of color tolerance. But the committee missed Mr. Burchenal, President of the company and a long-time member of the ISCC, by a very few minutes. The excellent steaks that were promised for dinner were quite up to expectations. In fact Dr. Balinkin proved a fine host; and the meeting is one which will be long remembered!

ICI  
QUESTIONNAIRE  
ON COLORIMETRY

We have received from Dr. K. S. Gibson, Chairman of the U. S. Technical Committee on Colorimetry and Artificial Daylight of the ICI, a copy of the questionnaire sent out by him to other nations in preparation for the Paris meeting, July 1 to 7, 1948. Other members of this committee are D. B. Judd, M. Luckiesh, D. L. MacAdam and P. Moon. The International Commission on Illumination, which served us so well in establishing the 1931 ICI standard observer, is planning to resume its deliberations interrupted by the war. Because of the great interest and importance of these meetings we give the questionnaire with very little abridgement.

1. Proposed Standard Illuminant E.

At the tenth session of the I.C.I. at Scheveningen in 1939 it was recommended that the national committees study the advantages which the use of standard illuminant E would present as a substitute for standards illuminants B and C, to represent a generally satisfactory artificial daylight, and to serve as a common basis whenever



it is necessary to characterize the color of an object for the purpose of international comparisons.

A. The proposed new illuminant E ( $x = y = z = 0.3333$ ) is realized by combining I.C.I. illuminant A (2848°K) with a specified Davis-Gibson filter, in a manner similar to the realization of illuminants B and C. Many in the United States are opposed to the substitution of the proposed illuminant E for standard illuminant C in the colorimetry of non-self-luminous objects.

Do you favor or disfavor the adoption of a new standard illuminant E for the colorimetry of non-self-luminous objects?

B. In the colorimetry of light sources there appears to be some advantage in the use of the point ( $x_w = y_w = z_w = 0.3333$ ) representing the equi-energy source as the achromatic point for the determination of dominant wavelength and purity.

Do you favor the adoption of illuminant E for the achromatic point in the colorimetry of light sources, or would you prefer that the hypothetical equi-energy source be used for this purpose?

## 2. Colorimetric Purity.

(A second recommendation of the 1939 session of the I.C.I. relates to a definition of colorimetric purity. The present questionnaire asks for comments on a suggested revision of this definition. The suggested revision uses the spectrum locus and the purple boundary of the mixture diagram for unit colorimetric purity. It uses two achromatic points. For self-luminous bodies the point representing the proposed standard illuminant E ( $x = y = z = 1/3$ ) is suggested; and for light reflected from objects the point representing the illuminant is suggested. Since the chromatic and achromatic components are to be evaluated in terms of luminance this definition agrees with that given in the OSA colorimetry report, JOSA 34, 669; 1944.)

## 3. Standard Observer.

Do you have any scientific evidence or practical experiences that indicate that the standard observer fails to represent normal observers satisfactorily?

## 4. Standard Illuminants.

A. In view of the possible influence of ultraviolet irradiation on the colors of fluorescent samples, do you believe that the definition of standard illuminants A, B, and C should be made more precise in regard to the ultraviolet?

B. In view of the growing use of fluorescent materials and of light sources that are rich in ultraviolet energy, such as MCF/U lamps, do you believe that an additional standard illuminant different from illuminants A, B, and C, by having relatively more ultraviolet energy, should be established?

## 5. Illuminant for Color Matching.

For commercial color matching, is it your practice to use chiefly (a) one or other of the standard illuminants A, B or C, (b) some other combination of filter with an incandescent lamp, (c) some fluorescent lamp, (d) some phase of natural daylight, or (e) some other light source?



## 6. Specification of Color-Rendering Properties.

Has any recognized method been developed to indicate the degree to which artificial daylight produces a rendering of object colors in conformity to that produced by one of the standard illuminants?

## 7. Color Discrimination.

The various National Committees are requested to supply such data on discriminability of various colors and on ways of distorting the XYZ lattice to yield approximately uniform color scales as have been obtained since 1939. These data will be summarized by the U. S. Committee for consideration at the 1948 meeting.

## 8. Color Terminology.

It is recognized by the U. S. Committee that discussion of color terms at the 1948 meetings of the I.C.I. might have the very desirable result that divergent usage in the various nations would be reduced, or even eliminated for some color concepts. To keep the discussion within reasonable bounds, however, it is proposed to limit discussion to the nine psycho-physical and five psychological concepts defined below:

(There follow definitions of the psycho-physical terms: color, luminance, directional luminous reflectance, dominant wavelength, complementary wavelength, purity, chromaticity, tristimulus values, and chromaticity coordinates; and of the psychological terms: brightness, lightness, hue, saturation, and chromaticness. Comments on the definitions and on the terms used for the concepts are requested.)

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Dr. Gibson has copies of the complete questionnaire for distribution to anyone who wishes to assist the American Technical Committee to formulate American opinion by sending in comments; address requests to Dr. K. S. Gibson, Chairman, U. S. Technical Committee No. 7 of the ICI, National Bureau of Standards, Washington 25, D.C.

THE NAVY      The U. S. Navy has retained the services of Faber Birren, author and  
ENLISTS      color consultant of New York and long a member of the ISCC, to de-  
COLOR      velop a report on standard color practices for its shore establish-  
                ments. Functional applications of color will be worked out for ship  
yards, ordnance plants, supply depots, air stations, administrative and personnel  
buildings, hospitals, transportation equipment, and will include facilities of the  
U. S. Marine Corps.

This is perhaps one of the most extensive programs of its kind ever undertaken. It will eventually affect the appearance of all shore establishments located throughout the world, and its benefits will be shared by thousands of enlisted and civilian personnel. Functional color involves an engineering method in which technical studies are made of illumination, critical seeing tasks, plant operations, layout and equipment. Measurable results are sought in greater production, higher standards of workmanship and reduced accident frequencies.

The work of Faber Birren is well known and has been presented before the medical profession in national conferences on ophthalmology. In addition to his cooperation with the Navy, technical assignments have also been undertaken recently for the Board of Transportation of New York City in shops and transportation equipment.



# DANGERS OF CORRECTIVE TRAINING OF COLOR BLINDNESS

Our Subcommittee on Problem 11, Color-Blindness Studies, is in print again, this time with its vigorous statement condemning any training systems of color blinds claimed to be claimed to be corrective.

This statement, unanimously approved by the Subcommittee, has been included verbatim in Color Vision Report No. 15 of the Medical Research Laboratory, U. S. Naval Submarine Base, New London, Connecticut, prepared by Lt. Comdr. Dean Farnsworth. Statements by Dr. Judd of the National Bureau of Standards and by Professor Fry, Director, School of Optometry, Ohio State University, are also included. The whole report was assembled and submitted to committees of the American Medical Association upon their request and that of the Army-Navy OSRD Vision Committee. It has been accepted by the American Medical Association Section on Ophthalmology, the American Ophthalmological Society, the American Committee on Optics and Visual Physiology, and the Association of Schools and Colleges of Optometry.

The gist of this report is that no case of congenital color deficiency has ever been cured by corrective training; but many people, practitioners, too have been fooled into thinking they, or their patients, have been cured. A red-green confuser is seldom dangerous unless he thinks he can see as well as anybody. This report is intended to supply ammunition for a publicity campaign to wake people up to those dangers. Copies may be obtained from the Medical Research Department, U. S. Submarine Base, New London, Conn., by asking for Color Vision Report No. 15.

One very important resolution which came too late to be included in the report was received from the American Association of Colleges of Ophthalmology through Professor Glenn Fry. They have gone on record on this question by passage of the following emphatic and constructive resolution:

"Whereas, the member institutions of the Association of Schools and Colleges of Optometry without exception currently teach that the basis of 'color blindness' consists in defective physiological mechanisms and currently teach that color blindness cannot be cured or alleviated by any method thus far proposed, and

Whereas, the Inter-Society Color Council has unconditionally condemned so-called corrective training of color-vision defectives, and

Whereas, The Association of Schools and Colleges of Optometry wishes to announce its stand on this issue, now, therefore

Be It Resolved, that the Association of Schools and Colleges of Optometry heartily concurs in the condemnation above mentioned and urges that optometrists refrain from claiming to be able to alter the physiological mechanism of color vision by any means heretofore advocated for this purpose, and

Be It Further Resolved, that the Association of Schools and Colleges of Optometry commends continued investigations of the basis of abnormal color vision but disapproves of the publication of results in non-technical periodicals, and

Be It Further Resolved, that this resolution be given wide circulation in the optometric press."

# IMPROVED TEST FOR COLOR BLINDNESS

We have been advised by the Co-Chairmen (Drs. Judd and Hardy) of our Subcommittee on Problem 11, Color Blindness Studies, that a revised selection of the



AO Pseudo-Isochromatic Plates for Testing Color Perception is now available to the public through the sales organization of the American Optical Company, Southbridge, Mass. These eighteen plates selected from the original 46-plate edition on the basis of studies made by members of the subcommittee probably constitute the first color-perception test whose performance has been validated in advance by a thorough statistical study. It is known that these charts used in accord with the instructions supplied therewith form a reliable screening test for defective red-green vision. The material of the edition has been sampled by the subcommittee and found to correspond to that used in the statistical studies. The approval of this 18-plate selection by our subcommittee is indicated on the title page and in the Foreword. The instructions given are taken from the paper by Hardy, Rand and Rittler (*J. Opt. Soc. Amer.* 36, 610; 1946). Our thanks are due to Mr. H. S. Yuhas, Vice President, The Beck Engraving Company, who made this important cooperative result possible. Spread the word around. Don't use the old 46-plate edition; get the shorter 18-plate selection that really works.

TCCA  
CONTINUES  
ACTIVE

As we stated in the September issue, our growing member-body, The Textile Color Card Association of the U. S., has continued to be very active, and we then had on hand some 14 pages of reports of the association's constructive activity. In the interval this amount has been increased; and we have also had reports of the doings of the Association's capable and energetic Managing Director, Margaret Hayden Rorke, who is again able to renew her tours of Europe to feel the color-pulse of the European nations historically important in the color and fashion fields.

Besides the reports on the organized activities of the TCCA, there has come to our attention an interesting article by Mrs. Rorke, entitled "Tapestry of Color," in the October 1947 issue of *Textile Colorist and Converter*. The article was occasioned by the trip of the French warship *Montcalm* from Toulon to New York to bring to the Metropolitan Museum a number of tapestries shown in June-July, 1946, at the Musée d'Art Moderne. Mrs. Rorke has had ample opportunity to study the tapestries of the master dyers of the Gobelins, Aubusson, Beauvais, Arras and Brussels ateliers and works, hence her remarks on these tapestries are authoritative. The author goes back to the early East and Egyptians for the origins of tapestries on the basis of examples found especially in the museums at Lyon and London (South Kensington), but points out that the art came to flower among the French trade guilds in the 13th and 14th centuries. The famous Apocalypse of Saint John and other later examples are considered next. Finally the work of contemporary artists is considered in some detail: work done or influenced by Lurcat, Raoul Dufy, Picasso, "Ronault" (is this a misprint for Georges Rounault, religious painter and member of the Fauve group?), Gromaire, Lucien Coutaud and Roger Bezombes. Two black-and-white illustrations are given; but we are grateful to Margaret Hayden Rorke for her interesting and authoritative color notes to supplement these and for giving us the general background material.

Turning to Association matters, we now have on hand the following bulletins issued by TCCA under Mrs. Rorke's direction whose information has not been passed on to our readers: Supplement to U. S. Army Thread Color Card, 1948 Spring Woolen and Rayon Cards (and separate releases on the woolen and rayon colors), 1948 Spring Millinery Colors, 1948 Spring Colors for Men's Felt Hat Bodies, 1948 Spring Glove Colors, 1948 Spring Shoe and Leather Color Cards (and separate releases for the men and the women), Spring 1948 Fashion Coordination Guide for Women's Shoe and Leather Colors, Spring 1948 Merchandising Notes for Men's Shoe and Leather Colors; and in addition three bulletins on various fall colors previously touched very lightly but probably



now too old to be of great interest. These bulletins go to the growing list of national associations and other domestic and foreign members of the TCCA to give them advance notice of the expected color trends, as predicted by Mrs. Rorke's first-hand contacts and surveys of the fashion world.

The woolen colors feature the Moroccan Colors, inspired by a notable exhibition of Berber jewelry held under the auspices of the French government, and a group of subtler and quieter mood called Misty Pastels. The former include Sahara Rose, Barbary Blue, Sultan Gold, African Emerald, Oasis Green, Exotic Orchid, Desert Turquoise, and Moresque Red; the latter comprises Cream Ivory, Sultry Blue, Violet Mist, Cosmic Green, Cloud Pearl, Nebular Pink, Watertint and Golden Haze. Basic color ranges include "warm burnished tones" of copper, amber, gold and honey; and "spicy tones in the gamme of" cinnamon (Cinnamon Spice) and paprika. Coppery hues are expressed in Tahiti Coral and Gauguin Red; these and other colors (Monet Mauve and Degas Blue) influenced by famous painters were inspired by a visit to a Paris exhibition of Impressionist and Post-Impressionist paintings at the Jeu de Paume Museum in the Tuileries Gardens. In the rayon collection this visit also inspired Renoir Green, Manet Pink, Cézanne Gold and Van Gogh Amber. On both textile fibers, greens rate high fashion favor. They include "light pine" versions and "yellowish moss-tinted shades" and paler "enamel and petal" greens.

The rayon colors, also inspired by a visit to a unique pageant, feature spirited Gypsy Hues as well as more serene Sleepy Tints, the latter described as "toneless tones." They include Dulcet Cream, Azure Dawn, Dream Mauve, Shadow Grège, Silver Moon, Drowsy Pink, Sundown Green and Evening Blue; while the Gypsy Hues embrace Primitive Turquoise, Fortune Gold, Romany Violet, Nomad Red, Green Magic, Amulet Rose, Bohemian Blue and Carnival Green. For both fabrics there are of course both new and old blues; and in the neutral group clear medium grays, as well as a "pale moonlight version" and a "cloudy off-white."

The millinery colors include 12 from the woolen collection and 6 from the rayon group as well as black, brown, navy and white staples and the colors Cloud White, Brave Red, Carioca Green, Pink Blush and Limebud. The Supplement to the U. S. Army Thread Color Card (Revised 4th Ed., 1945) includes "Shade K" equivalent to U. S. Army Russet, and "Shade L" (U. S. Army Slate Blue). Among the 1948 Spring Colors for Men's Felt Hat Bodies are three medium colors (Tannist, Pebble Grey and Willowbark, a "dusty sage") and four pastels: Turf Grey, Meadow Blue, Golden Sand and Greensurf. The advance Glove Colors comprise 8 of the woolen colors and 2 of the rayon colors, as well as Brown Almond and Admiral Blue from the Women's Shoe Colors; and Pastel Pink, Irish Green, Brave Red, Town Brown, white, black and chamois.

Lack of space forces us reluctantly to forego description of the 14 women's and 16 men's shoe and leather colors and discussion of the TCCA's fashion co-ordination guide and merchandising notes in this connection. We shall close this article instead with congratulations to TCCA and Mrs. Rorke for carrying on so well under the trying conditions created by post-war problems.

#### NEW GARDNER-HUNTER COLORIMETRIC APPARATUS

There has come to our attention a 6-page pamphlet, dated October 1947, on the New Hunter Photometric Unit and Exposure Heads to Measure Reflectance, Gloss and Other Features of Appearance. Because lack of space makes it impossible to discuss this development in any detail, we suggest that interested readers write directly to the Henry A. Gardner Laboratory, Inc., Apparatus Division, 4723 Elm St., Bethesda 14, Md. We are sure many will be interested because of the



designer's and the Laboratory's authoritative position in this field. An interesting feature of the pamphlet is a table of applications of reflectance and gloss measurements to different materials (2 columns each for reflectance and gloss), the rows referring to the following industries or materials: paints, ceramic products, paper, plastics, soaps and detergents, polishes and waxes, textiles, metals, pigments and printing inks. According to the ISCC Secretary, who has used it, the new instrument marks an important development in the field of colorimetry and all appearance problems. An interesting feature is that it allows wet paint to be poured out on a self-contained glass plate and measured directly.

#### SOIL-COLOR CHARTS

Color charts to represent physical standards of soil color were adopted at the 1946 Soil Survey Staff Conference by the Soil Survey Color Committee. The charts themselves consist of chips of standard Munsell color papers for seven hues in the soil-color range which have been assembled by the committee with accompanying replaceable name-diagram sheets. These were distributed in September, 1946, for use and comment. To date the comments have been generally favorable and indicate that the chart itself is receiving widespread acceptance, and though susceptible to further improvement, is adequate for soil-survey purposes. Work is proceeding on color names for soil-survey use, but the committee thinks that certain modifications are yet needed before adoption by the U. S. Soil Survey for official use. It is believed that only a few years will be needed for the entire staff to become so accustomed to using the notation that technical descriptions lacking Munsell notations will be regarded as incomplete.

When an informal report of the progress of this work was made recently to the ISCC Executive Committee the suggestion was made that if such charts were available note of the work and of the availability of the charts should be made in the News Letter. Thus, though the work of the committee is incomplete, ISCC members may wish to know that charts such as those used by this committee are available as "Soil Color Charts" from the Munsell Color Company.

Mr. Edward H. Templin of College Station, Texas, chairman of the Soil Survey Color Committee, has done a fine piece of work in getting the soil people together on this work and in supplying them with a satisfactory series of charts. These charts supersede those in U.S.D.A. Misc. Publ. No. 425. In that publication colors to represent 57 ISCC-NBS color names in the soil range were produced on charts; they were specially made to represent the "central" color for each name. It was soon obvious that while 57 names may be enough, 57 color chips are not enough to cover satisfactorily the range for matching purposes. Since low-chroma colors are much needed for soil colors, special  $/1$  and  $/3$ -chroma colors were made up for several hues. At present the soil-color charts consist of 7 Munsell hue charts ranging from 10 R to 5 Y. On the 10 R and 2.5 YR charts there are no chips above 5/ value; on no chart are there chips beyond  $/8$  chroma. On all "5" and "10" hues  $/1$  and  $3/$  chromas are included, as well as chroma steps 2 to 8 which also appear on the "2.5" and "7.5" hues. Blank charts were supplied by the Government Printing Office to the Munsell company, which supplied and pasted on the color-chips. Mimeographed explanation and provisional color-name charts were supplied by the committee, which made arrangements for the Munsell company to carry the new charts in stock for sale at retail. The committee itself has distributed copies to each inspector, federal soil surveyor, cooperating state agency and S.C.S. State Soil Scientist.

D. N.

#### BIBLIOGRAPHY OF COLOR

The editors of the Textile Research Journal are publishing a series of specialized bibliographies intended to



present lists of books and other primary references in a restricted field which will serve as a basis for a company or personal library. In April 1947 this journal carried a critical bibliography by our News Letter Editor. It was titled "Relation of Color Perception to Chemical Structure: a Critical Bibliography" and consisted of 94 items which followed a 4-page explanatory introduction and foreword. The whole approach to this bibliography is of such unusual interest that special attention should be called to it. Usually in discussing color perception the physical and psychological aspects are considered, with little or no discussion of the relation to chemical structure. In an illustrative figure Dr. Godlove places color perception (what you see) at one corner of a triangle, with chemical structure and physical data at the other two corners. On the leg between color perception and physical data we have psychophysical correlations such as were covered in the Nickerson bibliography in the February 1946 Textile Research Journal. On the leg between chemical and physical data there is a series of physical-chemical relations that were covered in the body of the text; and between chemical structure and color perception a series of (psycho-)chemical relations, usually thought of as merely chemical. The bibliography is divided into three sections. Section I (38 items) covers (psycho-)chemical relations: static (chromophores, auxochromes, etc.), and dynamic (tautomerism, etc.). Section II (items 39 to 72) covers electronic and resonance theories, quantum-mechanical calculations and steric hindrance of resonance. Section III (items 73 to 94) contains physical data concerned with absorption spectra.

The preparation of this bibliography from a point of view designed to include everything from observations of the consumer to physical measurements and chemical reactions of colorants is a very interesting approach and one that helps to bring some semblance of order out of the very broad literature so often classified under the general heading "Color." For those who do not have available the Textile Research Journal, there is a reproduction of the illustrative figure on page 779 of a paper on "The Limiting Colors Due to Ideal Absorption and Transmission Bands" prepared by Dr. Godlove for the Pfund issue of the Journal of the Optical Society of America (October 1947). I commend this paper also to your attention.

D. N.

EDITOR'S  
NOTE

In view of our Secretary's kind remarks, quite unsolicited, concerning our recent articles, it is conceivable that more requests for reprints may reach us. Regretfully it must be stated that in the case of the critical bibliography such requests have already exceeded by a large number the advance estimate (after deducting a number earmarked for a list of active color workers). This is also true of the Editor's series in Rayon Textile Monthly on the same subject but written in running-account rather than in critical-bibliography style. For these very reasons, however, it is believed that the JOSA paper, containing the perception-chemistry-physics triangle referred to by D. N., was ordered in sufficient quantity to take care of all requests.

SIMON-PURE  
IMPROVEMENT

In a letter from Dr. E. I. Stearns, chairman of the AATCC Committee on Color, which recently made recommendations concerning color description to the Chairman of the Steering Committee of the Revised "Colour Index" to be published by the AATCC in cooperation with the (British) Society of Dyers and Colorists, was included an excellent resumé table prepared by Mr. Fred T. Simon of Sidney Blumenthal & Co., Inc., Shelton, Conn. Mr. Simon, who is a member of the Color Committee, succeeded in condensing the "Correlation of Colour Index Color Names and ISCC-NBS System" from the committee's 14 pages into 2 pages, a notable feat in view of its resulting lucidity. Opposite



the C. I. hue or color names in parallel columns are given the abbreviations, the Munsell rennotations, the corresponding ISCC-NBS hue names with their defining Munsell hue notations as limits and the modifiers used with the hue names for further description of the colors. We suggest that you write to Mr. Simon at the above-given address if you are interested in having a copy.

#### MODERN CHEMICAL AND "COLOR" TERMINOLOGY

In view of our recent reviews of the relations between absorption spectra and chemical structure, and the difficulty of varying terminology used by various authors in this and the broader chemical (especially "resonance") fields, we reproduce a table found in a paper by S. R. Palit on the hydrogen-binding process (J. Physical and Colloid Chem. 51, 837-57; May 1947). Cases in a much broader field are illustrated by the dimer formation of a 2-molecule water aggregates in which there is some sort of "hydrogen binding" or resonance binding through a hydrogen atom of one water molecule and the oxygen atom of another, the bond being weaker than a "true" chemical bond. In this case the terms used to describe the O and H atoms, respectively, by different authorities and their schools are:

	Sidgwick	G. N. Lewis	Ingold	Lapworth	Brönsted
Oxygen	Donor	Base	Nucleophilic	Anionoid	Protophilic
Hydrogen	Acceptor	Acid	Electrophilic	Cationoid	Protogenic

#### THANKS MISS CHARLTON

By utilizing a week of his 3-week vacation and not going to the Cincinnati OSA meeting, the Editor managed to get his committee and editorial files in somewhat better shape and to answer part of the accumulation of unanswered letters received in the last few months. One unanswered note was from Maryette Charlton, formerly of Pratt Institute but now in Chicago, enclosing several items of color interest, one or two of them items of such a nature that they could be presented in that lighter vein which we think would serve to relieve the monotony of very factual technical information on color. Such a one is an item on "mosquitoes and color." But sadly we must defer these items until a later issue, though previous reader comment have fortified us in the belief that these not-too-technical items in small proportion are very welcome. For you can see for yourself that our available space has been filled in serious style. Miss Charlton's items are both meaty and interesting; so our thanks go to a recent member and new contributor.

#### DOODLE-STIX

As mentioned in an earlier item, the October 13 issue of LIFE magazine (pages 107-110) contained a story about the work of Isay A. Balinkin, ISCC Counsellor, in connection with gadgets he has made as teaching aids for use in his physics classes at the University of Cincinnati. One device, by means of a series of mousetraps and rubber balls, illustrates how atomic fission is accomplished. Another is a simple matter of blowing rubber gloves to different sizes.

Of special interest to Council members is the device for which LIFE included four pictures, one invented by Professor Balinkin to show the shapes of all crystals found in matter, as well as other geometric forms. It is the one some of you may remember seeing at the evening meeting of the Council, held last spring at the Commodore. The device is called Doodle-Stix. It consists of 12 wooden sticks and 8 flexible, three-way rubber corners. Usually the sticks are joined in such a way as to make a cube, although other starting forms can be made. The cube is then distorted and contorted to make a variety of shapes. The wooden sticks are colored red, yellow, green, and blue in groups of three. This makes possible a variety of color combinations.



In addition to the usefulness of this device in teaching, it has become quite popular as a children's toy — that is, when the children can get it away from the older folks. For those of you who may want to get a set, we can tell you that Doodle-Stix, complete with instructions, sells for one dollar and can be obtained from the Kay Products Company, 906 Main Street, Cincinnati 2, Ohio. We think it makes a swell Christmas gift for children.

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