

# INTER-SOCIETY COLOR COUNCIL

## NEWS LETTER

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News Letter Committee:

Eugene Allen, Chairman  
Deane B. Judd            Dorothy Nickerson  
Albert H. King            Ralph E. Pike

Editor: Eugene Allen  
American Cyanamid Company  
Bound Brook, New Jersey

Secretary: Ralph M. Evans  
Color Technology Division  
Eastman Kodak Company  
Rochester 4, New York

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NEW FORMAT

With this issue of the News Letter, we introduce a slight change in format - an increase in margin all the way around the page. Although this will give you more pages to read, we think it will be easier to read each page. So far, the change is on an experimental basis, but if the response is favorable, we'll make it permanent. As ever, your comments are invited and will be appreciated.

COLOR MEASUREMENT  
FORUM

A Color Measurement Forum--which will present the case for, and explore the limitations of, color metrics from a paint producer's viewpoint--will be presented at the 34th Annual Meeting of the Federation of Paint and Varnish Production Clubs in Cincinnati, Ohio, October 24, 1956. An outstanding panel has been selected--representing a cross section of the finishes industry which has successfully applied color metrics in color development or control--to discuss their experience with a variety of commercial instruments and techniques.

The panel members and the subjects of their talks will be: (1) Frank S. Grundy, of Imperial Flo-glaze Paints, Ltd. He will serve as the Moderator and will present the "Introduction." (2) Dr. Isay Balinkin, of the Department of Physics, University of Cincinnati--"Basic Elements in Color Measurement." (3) Mark P. Morse, of E. I. du Pont de Nemours & Co., Inc.--"Color Measurement with the General Electric Spectrophotometer." (4) Sam J. Huey, of The Sherwin-Williams Co.--"Use of Gardner Color Difference Meter for Production Control of Shading Operations." (5) Henry A. Tuttle and Melvin M. Gerson, of Ford Motor Co.--"An Application of the 'Color master' Differential Colorimeter for Control and Evaluation of Maintenance Paints." (6) William C. Parle, of California Ink Co.--"Color Measurement With the

I.D.L. Color Eye." (7) A. J. Bruning, of H. B. Davis Co.--"Visual Control of Color (the Davis-Bruning Colorimeter)." (8) Norman R. Pugh, of Sears, Roebuck & Co.--"An Application of the Beckman Model DU Spectrophotometer to Paint Color Control."

An open discussion of all papers will be held at the conclusion of the program.

Dr. Balinkin's presentation will be a demonstration lecture. This introduction to the forum by a noted authority on colorimetry will outline the aspects of physics, chemistry, physiology, and psychology which are basic to the understanding of color measurement procedures.

A special exhibit of color control equipment and instruments will be open during the regular exhibition hours of the Paint Industries' Show, which will run concurrently with the Annual Meeting.

It is expected that the papers to be presented at the forum will be published in full in the November or December issue of Official Digest.

#### ATMOSPHERIC OPTICS SYMPOSIUM

The Boston University Physical Research Laboratories sponsored an atmospheric optics symposium, held on September 5-7 at Sargent Camp, Peterborough, New Hampshire. There were three sessions: the first, on September 5, covered "Atmospheric Problems in Aerial Photography," the second, on September 6, covered "Photography of Celestial and Air-Borne Objects," and the third, on September 7, covered "Vision Through the Atmosphere."

#### REVIEW OF ZIGLER'S WORK

Ed. Note: Several months ago, ISCC past chairman Michael J. Zigler sent Dorothy Nickerson several reprints of papers published by him in cooperation with Ernst Wolf, as well as a review written by him of a book by Segal. Miss Nickerson thought it would be a good idea to have Dr. Zigler's work reviewed for the News Letter, and we heartily concurred. Dr. Glenn A. Fry of The Ohio State University's School of Optometry was very helpful in arranging for Dr. Jay M. Enoch of the same school to write the review. The review is lucidly written, and explains some of the controversy concerning the effect of pre-exposure to ultraviolet radiation on dark adaptation.

The name of Michael Zigler has been associated with studies of dark adaptation for several years. It is difficult to separate his work from that of his associate, Ernst Wolf, and from the still rampant controversy centered about the effect of pre-exposure to ultraviolet radiation on dark adaptation. Several selected papers will be considered and discussed.

The fundamental philosophy and experimental plan followed by Wolf and Zigler is embodied in the following statement: "Since the cones are assumed to be basic to photopic, and the rods to scotopic, vision, the dark adaptation function seems to provide an approach to the study of the functional relationship existing between the two modes of vision." (1) Hence,

these authors have quite systematically investigated several variables of the dark adaptation function.

In 1950, in a paper dealing with the effect of test field size on dark adaptation (1), they concluded that the larger the test field the lower the thresholds for both rod and cone portions of the curve and the earlier the break point between photopic and scotopic portions of the curve. These findings were demonstrated for both foveal and parafoveal test field centration. In an associated study they showed that the threshold for light detection was lower than that for recognition of a striped pattern.

In the same manner, these authors demonstrated that thresholds could be lowered by increasing the duration of the test flash (2) for both central and parafoveal centration of the test field. As might be expected, the effect of varying duration of test exposure was more marked for peripheral fixation than for central fixation for the scotopic portion of the curve, and vice versa for the photopic segment. These differences are related to cellular population in the two regions of the retina. In both this and the previous experiment, it is obvious that the larger the area radiated, or the greater the duration of test radiation, the greater the number of elements excited. In varying test flash duration from one second to one hundredth of a second the cone threshold varied approximately one log unit, and the rod threshold shifted about one and one-half log units.

Wolf (3) has shown that near-ultraviolet radiation present in the pre-exposure light source delays rod activity and decreases the sensitivity of the rod segment of the curve. The existing controversy deals with the question of the validity of these and subsequent findings by Wolf and his co-workers. Prior to a discussion of this work (with emphasis upon the contributions of Zigler), it should be remembered that the entire effect is small relative to other variables. Above, a range of threshold values of one and one-half log units was considered. The phenomenon in question is of the order of one-quarter to one-third log unit.

Zigler, Wolf and King (4) published a study dealing both with pre-exposure conditions and post exposure surround level. Considering first the effect of surround on dark adaptation measurements, they showed that the presence of a surround both reduces rod sensitivity and delays the onset of the rod portion of the curve. Interestingly, there is some evidence for a lowering of the threshold plateau level for cones, and possibly for rods, in the presence of very low surround luminance.

The presence of ultraviolet in the pre-exposure light similarly acts to delay the initiation of the rod portion of the curve and raises adaptation thresholds somewhat. For all levels of background illumination employed (from zero to 40 millilamberts), the rod segment shows evidence of desensitization and a delay in the break point. Curve elevation is less for cones than rods, but is evident especially for higher values of surround illumination. In a separate experiment foveal adaptation was studied. With no surround illumination present, pre-exposure to UV had little effect. In the presence of surround illuminations equal to or greater than four

millilamberts, differences were manifest for pre-exposure stimuli including UV radiation. The UV wavelength band employed was 285 m $\mu$  to 400 m $\mu$ .

Wald (5), shortly thereafter, challenged this work and the previous work of Wolf. Using the same equipment and to an extent the same observers, but employing a somewhat different methodological approach, Wald found little or no evidence for a change in adaptation for ultraviolet pre-exposure. Further, he largely dismissed the possibility of such effects on the basis of the transmission properties of the lens of the eye in this region. It might be noted here that although the non-aphakic eye transmits little UV to the retina, the lens is known to fluoresce in the presence of this radiation.

In a rebuttal, Wolf and Zigler (6) demonstrated that certain of the experimental methods employed by Wald may have caused a reduction in differences caused by pre-exposure to UV. Specifically they showed that pre-exposure of the two eyes simultaneously, to differing conditions, results in smaller adaptation threshold differences than those obtained when the same eye is tested under two conditions at separate times. Apparently there is some binocular interaction inherent in these measurements. As a second study, these authors revealed that pre-exposure to UV affected adaptation only for shorter wave length test stimuli. A red test patch showed no effect with pre-exposure, a green test patch (in the range used by Wald) exhibited only slight change, while a blue test patch (and white light) showed a full displacement. However, the authors seem to agree with Wald, in that there is doubt as to the mechanism for desensitization of the visual elements in the presence of pre-exposure to UV.

At this time, this controversy is not solved. The most recent studies continue to reveal conflicting reports. Moeller et al (7) report virtually no change in dark adaptation thresholds with pre-exposure to UV radiation, while, on the other hand, White (8) has demonstrated changes in adaptation thresholds. Thus, it appears that the final answer is not yet at hand.

Wolf and Zigler (9) in a recent study investigated the effect of varying duration and intensity of a pre-exposure source on the course of dark adaptation. Their results showed that as duration of pre-exposure decreases the break point moves closer to zero adaptation time, with the level of the cone plateau remaining quite constant. In the case of reduction of the luminance of the pre-exposure source, the break point similarly moves closer to zero adaptation time, but in addition the cone plateau level drops with decrease in pre-exposure luminance. If break time is plotted against the product of intensity times duration, separate curves are produced depending on whether one varies luminance or time. Obviously, therefore, over the time range 16 minutes to 7.5 seconds, and over the luminance range 1510 to .11 millilamberts, the Bunsen-Roscoe law does not hold for break time determinations.

Zigler (10) most recently reviewed the new and challenging book written by Segal. As was noted in the introduction, this phase of the program at the Visual Research Laboratory at Wellesley College by Wolf and Zigler has been

largely aimed at investigation of the basic parameters of dark adaptation in order to ascertain information regarding the roles played by the rods and cones.

#### References

1. Wolf, E., and Zigler, M.J., J. Opt. Soc. Am. 40, 211-218 (1950).
2. Wolf, E., and Zigler, M.J., J. Opt. Soc. Am. 41, 130-133 (1951).
3. Wolf, E., Trans. Am. Acad. Ophthalm. and Oto. 53, 400-413 (1949).
4. Zigler, M.J., Wolf, E., and King, E. S., J. Opt. Soc. Am. 41, 354-359 (1951).
5. Wald, G., J. Opt. Soc. Am. 42, 171-177 (1952).
6. Wolf, E., and Zigler, M. J., J. Opt. Soc. Am. 45, 696-702 (1955).
7. Moeller, G., et al, "Dark adaptation and the near ultraviolet," U. S. Naval Medical Research Lab., New London, Conn. 14, 8, 12 Oct. 1955, Report No. 268, pp. 1-11.
8. White, W. J., Aero-Medical Research Lab., WADC, To be published.
9. Wolf, E., and Zigler, M. J., J. Opt. Soc. Am. 44, 875-879 (1954).
10. Zigler, M. J., "Review: Le Mécanisme de la Vision des Couleurs (J. Segal)," Psych. Bull. 51, 91-93 (1955).

Jay M. Enoch

#### CERAMICS FOR THE ARCHEOLOGIST

We call attention to a recent publication, "Ceramics For The Archeologist," by Anna O. Shepard: Publication 609, Carnegie Institution of Washington, 414 pp, 1956. It contains a section on color that would have delighted the soul of Dr. I. H. Godlove. Indeed, this very thorough and detailed handbook goes into so many subjects in connection with ceramics for the archeologist that we feel very sure that Dr. Godlove, with his great interest in archeology, would have reviewed it at some length. And the book would deserve it, for if all sections are handled with the clarity and understanding that is evident in the sections on color, luster, and paints and glazes (the only sections with which this reviewer has close contact), then this book should be a welcome reference to be kept close at hand by the professional in this specialized field, and a good introduction to the field for the amateur. For anyone with an interest in either ceramics or archeology, we recommend it.

D. N.

#### OFFICIAL DIGEST ARTICLE ON VIVID LIGHT FAST ORGANIC PIGMENTS

The June, 1956, issue of Official Digest, published by the Federation of Paint and Varnish Production Clubs, contains a supplement which is both unusual and attractive. This supplement, which is bound separately and is referred to as "Part 2," is devoted entirely to a paper on "Vivid Light Fast Organic Pigments," written by Vincent C. Vesce, technical director of Harmon Colors, B. F. Goodrich Chemical Company. The text of the article discusses the newer organic colors which possess superior light fastness in pastel tints. This is an interesting article, and well worth reading for its own sake. But the novelty lies in the illustrations - a complete set of color chips which demonstrate the tint of the original colors before exposure.

In a letter written to ISCC secretary Ralph Evans, Frank J. Borrelle, managing editor of Official Digest, explains that this issue is a first for a scientific publication. "Each of the colors is represented by a color chip made of lacquer pigmented with the actual color under consideration. The chips were deposited (not glued) by the McCorquodale process by Mahwah Color Co. To the best of our knowledge this marks the first time that the McCorquodale process (better known for printing of paint cards) has been adapted for a scientific publication such as ours. The application of the 81 colors required six passes through the McCorquodale Press. An interesting item of the process was that each 18 x 22 sheet (8-page form) had to be stacked on a wooden tray for drying. With one sheet to a tray, the number of trays ultimately used for the run of 8,000 was 48,000."

Our congratulations to both Dr. Vesce and Mr. Borrelle for this excellent piece of work.

RECENT ARTICLES  
IN "COULEURS"

We list here English translations of the titles of several articles which appeared in recent issues of the French journal "Couleurs," published by the Centre d'Information de la Couleur in Paris:

March-April issue: Color Photography on Paper; Change of Human Behaviour Through Color; Writing by Means of Color in Inca Civilization; Great Art in Pocket Book Editions.

May-June issue: Defense of Good Work in Painting; Color and Harmony in Decoration; New Shades in Fluorescent Lamps and Illumination of the Home; Mural Tapestry; Color and Light in the Kitchen.

July-August issue: Illumination in Professional Life; Illumination and Safety; Color - Influencing Environment in Industry; Use of Color in Factories (Series of Articles); Color - And Illumination from Automobiles; Color and Schools.

JAPANESE COLOR  
PUBLICATION

ISCC Vice President Walter Granville has sent us a copy of a Japanese publication entitled, "Color," Vol. 1 No. 2. Leafing through this is an interesting - and frustrating - experience. There are just enough English phrases and illustrations to whet the appetite and make one wish to read the Japanese text.

The journal is attractively printed and bound, and set in easy-to-read (we think) type on high-quality paper. Near the front, there appears to be a section of book reviews, with the titles and authors set in the original language and the text of the reviews in Japanese. Such books as "The Science of Color," "The Retina," "Researches on Normal and Defective Colour Vision," "An Introduction to Color," "Color in Business, Science and Industry," "Basic Color," "Color Harmony Manual," and "New Horizons in Color" are among the many mentioned. On subsequent pages there are diagrams and photographs of lamps, lens arrangements, luminosity curves, chromaticity charts, color comparators, color solids, and color chips, all surrounded by elusive Japanese text.

November 29, 1955

The Japan Color Research Institute

Attn: Dr. Sanzo Wada, Director

1 Akasaka Fukuyoshicho

Subject: Color Charts and Color Names

Gentlemen:

This will reply further to your letter of April 7, 1955, acknowledged by Mr. Barbrow's letter of May 10, and will acknowledge with thanks the receipt of two copies of the 5th Edition of your Guide to Standard Color.

I must express my admiration for the technical excellence of the color charts in this Guide to Standard Color. May I also say that I am amazed at the completeness and convenience of the definition of English color names supplied by the translucent sheets interleaved with the color charts. The relationship between the systematic names defined by rectangles on these sheets and the nonsystematic names (Such as Rose, Maroon, Coffee, Straw, Opaline Green, Nile Blue, and Wistaria) defined by rounded areas of various sized is very clearly shown, and these areas combined with the corresponding color specimens make the definitions not only complete but maximally graphic.

The Munsell Color Company has made up one set of definitions of the ISCC-NBS color designations in the form of sheets to be interleaved in the Munsell Book of Color in such a way that the definitions and the corresponding color chart appear on opposite pages. Your plan of using translucent sheets for such definitions has some advantages, however, and we may adopt it.

Our method of showing the connection between the systematic color names and the nonsystematic is less precise than yours; it is simply to give the corresponding systematic color names for each of the nonsystematic names in the form of a dictionary of color names. We have appended this dictionary to our revision of the ISCC-NBS color designations; and since this publication was in galley proof form when I received your two copies of your Guide to Standard Color, I delayed acknowledging receipt of your copies until I could send two of ours. Two copies of National Bureau of Standards Circular 553, the ISCC-NBS Method of Designating Colors and a Dictionary of Color Names are being sent to you under separate cover. Very truly yours, Dwayne B. Judd Photometry and Colorimetry Section.

### カラーチャートとカラーネームについて

和田 三造 殿

拝啓 1955年4月7日附のお手紙について御返事いたします。色の標準の第5版2冊を御送付下さいました事を感謝いたします。

私は色の標準のカラーチャートの技術的優秀さを賞讃いたさねばなりません。スカラーチャートの中に挿入してある半透明紙に示された、英語色名の規定の完全さと便利さについて驚嘆いたしました。これらの半透明紙の上に矩形によつて規定された分類色名と固有色名(たとえばローズ、マルーン、コーヒー、ストロー、オパリングリーン、ナイルブルー、ウイスタリア)等の関係が色々な大きさの囲まれた区域によつて規定されて、非常にはつきり示されている。そして対応色種と結合したこれらの領域は単に完全であるばかりでなく高度に図式的に規定されています。

マンセルカラーカンパニーは分類規定と対応するカラーチャートを反対のページに表示する方法でマンセルブックオブカラーに挿入するためのシートの形体を ISCC-NBS 色表示に従つたセットを作り上げた。しかしながらこのような色名規定のために半透明のシートを使用している貴下のプランはいささか進歩的なものであり、われわれはその方法を採用したく思っています。

分類色名と固有色名との関係を示すわれわれの方法はあなたの方の方法よりいささか正確さをかくものがあります。単にわれわれの方法は色名辞典の形式により固有色名の各々に対して対応する分類色名をあたえるものです。われわれは ISCC-NBS の色表示の訂正にこのデクシヨナリイを附加いたします。2冊の色の標準を受取りました時には、未だそのグラザリしか出来上つておりませんでしたので、この二つをお送りする事が出来る迄御返事を延ばした次第であります。NBS の Circular 553 の2つのうち、即ち ISCC-NBS Method of Designating Colors と色名辞典を別便でお送りいたします。

D. B. Judd

On page 9 the reader will find a Rosetta Stone, in the form of a letter written by Dr. Deane B. Judd to Dr. Sanzo Wada, director of the Japan Color Research Institute. This letter is followed by its Japanese translation, and we reprint both the original and translation here for the benefit of our philologist readers.

**MUSTERSCHMIDT BIBLIOGRAPHY  
OF BOOKS ON COLOR**

The German firm of Musterschmidt, which sells specialized text books, has issued a catalog of text books dealing with color.

This is actually a rather extensive bibliography, since it contains approximately 650 titles arranged by subject. Complete author and subject indices are also provided. Plans are to revise this bibliography yearly.

The subject headings, under which the books are listed, are as follows:

1. Scientific Principles, Preparation; 2. Color in Technology; 3. Color in the Living World; 4. Color in Art and Advertising; 5. Color in Handiwork; 6. The Philosophy of Color; 7. Color Atlases, Standards, Scales and Dictionaries; 8. General Chemistry and Physics; 9. Patent Matters; 10. Miscellaneous.

Although this compilation is intended as a catalog (the price of each book is given in West German Marks), it seems to us that its value as a bibliography is such that many of you will be interested in it. Musterschmidt's address is given as Frankfurt/M, Rossmarkt 23/VI.

**CA TO OFFER  
JAMESTOWN COLORS**

On May 13, 1607, three small ships landed at Jamestown, on the James River, in Virginia. Out of that landing grew the first permanent English settlement in the United States. In 1957, the governments of the United States and the Commonwealth of Virginia will celebrate the Jamestown Festival to commemorate the 350th Anniversary of this historic event. The Color Association of the United States will play an important part in this celebration by establishing a group of colors, to be known as the Jamestown Colors, which will bring to life that important period in our history.

Miss Estelle M. Tennis, executive director of CA, announced CA's participation in the Festival after a trip from New York to Virginia. Just what the colors will be, Miss Tennis isn't saying - as yet. "We'll issue a brochure, probably in late September, showing the colors and authenticating them in relation to the Jamestown setting," she said. "They will be offered to the whole field of design - everything from women's wear to automobiles and home fabrics."

Miss Tennis and Miss Mary Burnley Gwathmey, of New York and King William County, in Virginia, have been working since last spring on the idea of appropriate colors to salute the 1957 celebration. Miss Gwathmey is consultant for color and design in merchandising for the Virginia 350 Anniversary Commission, which has headquarters in nearby Williamsburg. Miss Tennis spent four days in on-the-spot research, "I am amazed at the colors associated with what tends to be - but shouldn't be - a dim and dark period

in our history books," she said. "Jamestown women were far from puritanical about wearing colors. One account written in 1619 points out that they went to church on Sunday dressed in 'freshe flaming silke'!"

The Jamestown Festival will be a year-long panorama of commemorative events - pageantry, ceremonials, parades, public addresses, music and drama, exhibits of art and history, and entertainment. The observance will be centered in the historic Jamestown-Williamsburg-Yorktown triangle in Virginia.

ISCC'S FIRST YEAR: Ed. Note: When we presented our report of  
GATHERCOAL'S ADDRESS the News Letter Committee to the Council  
Membership in April, we asked for any suggestions on articles or series of articles which might be used in the News Letter. After the meeting, we were drawn aside by Dr. M. J. Zigler, who, as you know, was one of the past chairmen of ISCC. Dr. Zigler lost no time in telling us that a series of articles on the history of ISCC would be most informative and enlightening to our membership. Such a series, he said, would give us some appreciation of the tradition of our organization and the basic ideas which prompted its formation.

The News Letter Committee was enthusiastic about this idea, and Dorothy Nickerson sent us a copy of the minutes of all past ISCC meetings as background material. On looking these over, we decided that we could not choose a better article with which to start this series than the one presented as an address by E. N. Gathercoal on the occasion of the second annual ISCC meeting. Dr. Gathercoal, recently deceased (see ISCC News Letter 117, 1 (May, 1955)), was the first ISCC chairman. His address takes us back through the years and behind the scenes to show us how ISCC was first conceived and organized, and what its aspirations were.

We are passing Dorothy Nickerson's copy of the minutes on to our associate on the News Letter Committee, Ralph E. Pike, who will cull from the minutes other articles which may be of interest. Also we plan to ask some of you to contribute to this series from time to time.

#### ADDRESS BY CHAIRMAN E. N. GATHERCOAL

As the first complete year of the activities of the Inter-Society Color Council becomes history, it is most interesting to take a short backward look at the development of this organization.

#### History of the Organization of the Council

It is almost exactly ten years ago since a study of the color names in the United States Pharmacopoeia was undertaken with the object of putting these designations of color on a more accurate and scientific

basis. During the eight years from 1922 until May 1930 the U. S. Pharmacopoeial Revision Committee had this study under way, particularly through a subcommittee headed at first by Dr. George D. Rosengarten, and later by the present chairman of this Council.

This study constantly revealed the great breadth of the problem and the very limited amount of work that had been done upon it, and the very insecure foundation upon which this work rested. It became so apparent that the problem was so far outside the scope and talents of the U. S. P. Revision Committee that it was decided to call a general meeting at Washington in May 1930 of all of those persons deeply interested in the scientific study of color and lay the problem before them. In connection with this meeting an extensive color exhibit was arranged with the object of presenting the difficulties that the Committee had met with in its study and of the great need for concerted action to establish color names upon a firm scientific foundation. This exhibit received contributions from many interested individuals and firms and the meeting was widely attended by color physicists, teachers of art and color in colleges and high schools, manufacturers of apparatus for the measurement of color, producers of textiles, paints, artists' colors, crayons, papers, etc., authors of color charts and textbooks on color, pharmacists and chemists interested in this problem, ornethologists, philatelists and others. This meeting resulted in the appointment of a strong committee to organize a national body that would correlate activities concerning the scientific naming of colors.

The committee elected in May 1930 with Mr. R. B. Farnum as chairman had many projects before it, held a number of meetings and carried on an extended correspondence. In the fall of 1931 the first public meeting was called at which this committee reported and at which the organization of the Inter-Society Color Council was initiated. The first annual meeting of the Color Council was held December 29th, 1931 in the Museum of Science and Industry in New York City. This meeting was well attended by delegates from a considerable number of societies or associations interested in the color project. A constitution and by-laws was presented, discussed, amended and approved. Officers were elected and Committees were appointed to take care of the business of the Council. Problems for study were presented by a number of delegates.

#### The Work of the First Year

A review of the years progress of the Council activities should also prove of real interest. We will attempt to present this review in connection with certain statements made in the first annual address by the chairman of the Council. These statements were designated in this address as fundamental laws underlying the future success of the Council.

The First Law of Success was stated as follows: "There must be the presentation of a broad plan of advancement, a plan extending over a considerable period of years. This plan is laid down in the statement of the purposes of this Council and may be defined under three headings, i. e.: (a) Correlation or Coordination; (b) Stimulation or Encouragement; (c) Promotion or Advancement."

The founders of the Council believed that the most important achievement of the Council would be the bringing together of the great industrial organizations with color problems along with the physicists especially interested in the science of color. It was recognized, also, that great color problems existed in connection with various sciences, such as chemistry; in connection with great professions, such as medicine and law; in connection with government; and in connection with teaching. Correlation of the activities of all of these interests in relation to color is one object of this Council.

As accomplishments toward this end may be mentioned:

(a) During the past year a very definite movement has been presented to the Executive Committee, of the Council, and will be an important topic of discussion at this second annual meeting. This movement may be described as a desire expressed by nearly two-hundred great industrial corporations to establish a central point where their color problems could be definitely considered from a scientific and practical standpoint. It has been proposed that the Council should have an active part in this work.

(b) During the year, the United States Pharmacopoeial Officials have definitely considered the engagement of a color physicist to carefully scrutinize and revise color names in the forthcoming revision of the Pharmacopoeia, this work to be done under the direct guidance and auspices of the Inter-Society Color Council.

(c) A plan is under consideration by the officials of the Color Council for directly engaging the attention of teachers of art in colleges and schools, that they may lay their color problems before the Council and contribute to the solution of them.

(d) Numerous other specific problems have been brought to the attention of the Color Council and several of these have been definitely assigned to Committees; these Committees will report at this meeting of the Council.

As regards stimulation or encouragement of color research and of meetings or conventions of color where art, industry and science could meet on a common ground, we should like to report achievement of the Council during the past year as follows:

(a) The Council has taken a very definite interest in the February meeting of the American Optical Society, and Council members have contributed very definitely to this meeting.

(b) The Council has organized two strong Committees, i.e., a Committee on Color Nomenclature and a Committee on Measurement and Specification of Color. Each of these Committees numbers in its membership the foremost scientists working in the particular fields covered by the Committees. Each of these Committees has been very active during the year and will have splendid reports to present at this meeting.

As regards promotion or advancement of a better understanding of color problems and of closer relations between science on the one hand and art and industry on the other regarding color problems, we may report several achievements during the past year as follows:

(a) The publication of the first bulletin of the Council dated June 7th, 1932. This Bulletin of 25 pages incloses three Progress Reports by the following Committees: Committee on Color Problems, Committee on Measurement and Specification, and Committee on Color Names. It is to be hoped that this is but the first of many valuable Bulletins to be issued by the Color Council or to be published in the scientific journals reaching those interested in color.

(b) The action of approval and endorsement taken by the Committee on Measurement and Specification on the resolutions adopted at the Cambridge (England) meeting of the Colorimetry Committee of the International Commission of Illumination, which resolutions dealt with the international agreement on the specification of the standard observer, the standard illuminants, the standard conditions of illumination and observation, and the standard system of colorimetric specification. It is the conclusion of the Council Committee that the resolutions may now be considered as authoritative so far as American opinion is concerned.

(c) The activity of the Membership Committee is gradually bringing into fellowship a very considerable number of the leading national scientific organizations of America as members of the Council. This Committee is planning a rather extensive publicity campaign with the especial objective of enlisting the interest and cooperation of national organizations of an industrial and commercial character.

(d) A suggestion was presented at the first annual meeting that the Council should endeavor to stimulate higher education in the optical sciences by an endeavor to definitely find positions for graduates of the Optical School of the University of Rochester, which is the only school in America definitely organized for higher teaching of the optical sciences. The Committee has not been active, but this type of helpfulness should be promoted.

#### As Regards the Future

Finally, we should take a definite look into the future. While the Council has made a splendid start in its proposed plan and purpose, yet a very great deal remains to be accomplished. The Council should look forward to very definite achievements along the following lines:

(a) It should very definitely enlist the hearty cooperation and support of the industry of the United States which is definitely interested in color.

(b) It should definitely interest the two great groups of teachers of color, i.e., the Eastern Arts Association and the Western Arts Association, as well as other national organizations of art teachers and artists.

(c) It should definitely undertake to assign for study every problem relating to color that is presented to the Council. This does not mean that the Council should finance and actually carry on research and study in connection with all of these problems, but it should undertake to bring together the problem and the person or committee or organization that is best qualified to study the problem and present a solution of it. This means that the Council should develop a very wide acquaintanceship among persons and organizations interested in color science so that these problems can be assigned to the very best advantage.

(d) The Council should make its purposes and objects known and should initiate and request suitable publicity to do this.

(e) The Council should definitely endeavor to enlarge its membership in order that its influence might be more widely felt and that its activities might be more highly developed.

(f) The Council should endeavor to place as its Executive Head and on its Executive Committee the strongest executives that can be drawn from the ranks of those deeply interested in the study of color.

E. N. Gathercoal

TINY ERIKSON RECOVERS  
FROM ILLNESS

We were shocked to hear that ISCC director G. L. (Tiny) Erikson had a rather extended stay in the hospital recently. However, we are glad to tell that he is up and about again, and well on the way to recovery. We think you will enjoy reading the following letter, written by Tiny Erikson to Mr. Warren L. Rhodes of the Rochester Institute of Technology on July 25:

"Thanks a lot, Dusty - for all your concern over the condition of my health. I can now report that I am well on the way to complete recovery and am really feeling fine again, although the doc says it will be several weeks before I am up to full steam. So, while I am planning on coming into the office this week, I will have to take it easy and be a sissy for a while.

"After 13 blood transfusions and 3 weeks in the hospital, I ought to be O.K., although for a while they were pouring blood in one arm and taking it out of the other arm so often for testing that I wondered if there was much gain.

"The thing I really enjoyed most in the hospital was the good-night kiss each night from the beautiful nurses and also a good-morning kiss to wake me up. Boy! that was swell, and I almost decided to stay there much longer.

"Anyway, I'll be O.K. again soon now.

Yours very truly,

G. L. Erikson

"P.S. Oh! I forgot to tell you, those good-night and good-morning kisses from the beautiful nurses were always in my rump - and with a long needle."

PICTURE OF ISCC  
PRESIDING OFFICERS

While you are in a historical mood, we direct your attention to the photograph reproduced here. Pictured are all living ISCC presiding officers-- except for M. Rea Paul, who, unfortunately, came too late to be included in the picture. This was taken at the last ISCC meeting in April.

The officers listed, with their dates of office, are: front row, left to right, F. L. Dimmick (1938-9); W. Faulkner (1956- ); D. Nickerson (1954-5); D. B. Judd (1940-43). Back row, left to right, E. I. Stearns (1952-3); R. M. Evans (1946-7); I. A. Balinkin (1950-1); M. J. Zigler (1944-5); A. E. O. Munsell (1933).

COLORIMETRIST WANTED  
AT INTERCHEMICAL

We hear from Dan Smith that Interchemical Corporation has a position open in its New York Research Laboratories for an experienced colorimetrist to head a laboratory group. Familiarity with pigmented systems is desirable, but not essential. If you are interested, please write Daniel Smith at Interchemical Corporation, Research Laboratories, 432 West 45th Street, New York 36, N. Y.

OSTWALD-MUNSELL

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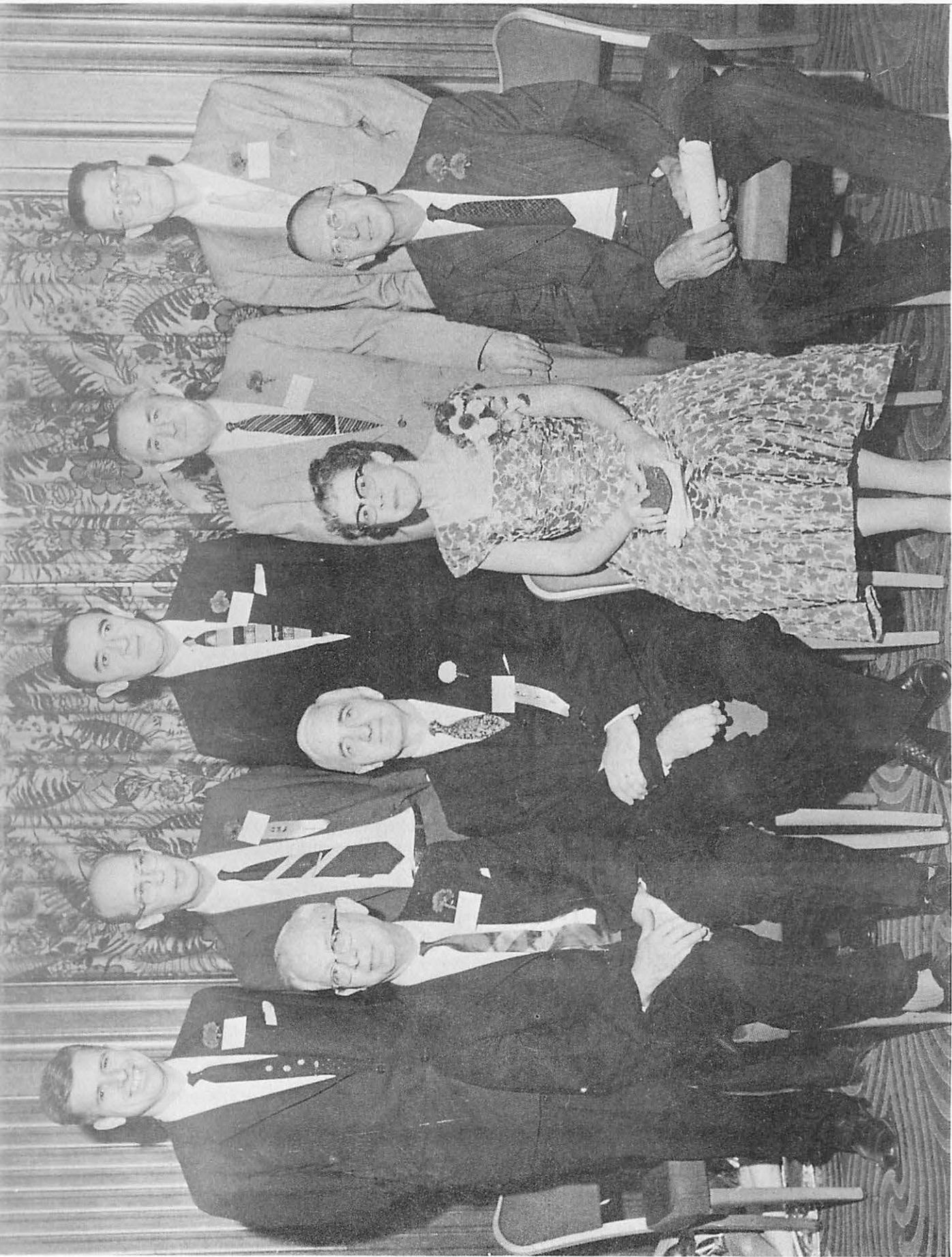
HISTORICAL NOTE

In our January News Letter No. 122 we quoted from recent correspondence with Grete Ostwald, daughter of Dr. Wilhelm Ostwald, and in the May News Letter No. 124 we carried a brief review of her recent book, "Wilhelm Ostwald, Mein Vater," including a translation of the last few pages which were expressed in highly poetic fashion in the original German. On June 27 Miss Ostwald wrote to Miss Nickerson to say that the News Letter "with the very good translation of the last pages of my W. O. book" had safely reached her and had given her "unusual pleasure." She thanked Dr. Wyszecski for his translation, and to Miss Nickerson she sent a passage from a letter written in 1914 by Dr. Ostwald to Prof. Paul Kraist, an early companion in color work. She thought it would be of interest, and that Miss Nickerson might enjoy having it. It was sent with generous permission to "please do with it whatever you like."

And need one ask what better Miss Nickerson would like to do than to share it with her friends in the Inter-Society Color Council, and to put on record so interesting and historical a note? The date is important; it was August, 1914. Who can tell what might have happened in the color field had the first World War not come at just that time? It disrupted the usual lines of communication; on the other hand it provided time for development of his color system on the part of Dr. Ostwald, in retirement at his home in Grossbothen.

Here is the passage taken from a letter from Prof. Wilh. Ostwald to Prof. Paul Kraist, Tübingen, dated 20-7-1914:

"...Ein weiteres Mitglied unserer Intern. Kommission (für d. Farbatlas) würde Herr Munsell in Boston sein müssen von dem ich vor längeren Jahren meine erste Anregung, mich mit der Sache zu beschäftigen, gewonnen habe. Er ist gleichfalls vollkommen auf richtigem Boden, und ich werde Ihnen demnächst einige seiner Arbeiten zuschicken..."



## Translation:

"...Another member of our International Commission (for the Color Atlas) should be Mr. Munsell of Boston from whom some years ago I received my first stimulus to work on this problem. He too is on perfectly sound ground and I shall soon send you some of his work..."

THE AMERICAN OIL  
CHEMISTS' SOCIETY

Ed. Note: The member-body featured in this month's article is composed of a group of scientists working in one of our country's most basic industries. Much of the food we consume daily is based on one or another of the edible oils. On the other hand, the inedible oils underlie the production of all soap, and many detergents. Drying oils are used in paint and varnish production. In such a basic industry, standardization is essential. Much of the efforts of AOCS are directed to this end; the "AOCS Methods" is a text of fundamental importance, found on the shelf of every scientific library. Color standardization is one facet of this activity, and ISCC Subcommittee for Problem 14, Colorimetry of Transparent Materials, was created to help solve the problems in this field. The author of the article which follows, R. C. Stillman, is chairman of this Subcommittee and also chairman of delegates from AOCS. We are proud to present this article, which shows clearly how AOCS functions and explains the many problems with which it is faced.

The Constitution and By-Laws of the American Oil Chemists' Society states: "It shall be the purpose of the American Oil Chemists' Society to encourage the advancement of the chemistry and technology of oils, fats, waxes, their constituents and compounds, and all allied and associated products; to promote research in these fields; to bring about standardization of analytical equipment, materials, and methods; to improve the qualifications and usefulness of oil chemists and technologists through high standards of professional ethics, education, and attainment, and by its meetings, discussions, analytical methods, and publications to increase and diffuse chemical and technical knowledge. The broad objects are to assist professionally and culturally the members of this Society, to develop industry and technology in these fields, and to add to the prosperity and welfare of the nation."

These were the objectives of nine men who founded the Society on May 20, 1909. It is indeed surprising that these objectives are in no way changed after nearly 50 years, during which the membership has increased from 9 to over 2,000. The nine men who founded the Society were all associated with the cottonseed industry, and all aware of the shortcomings of trading methods for cottonseed and cottonseed oil and the need for better analytical methods both for trading and industrial use.

The activities of the American Oil Chemists' Society are carried on by committees. These committees fall into three general classes, grouped under the headings of administrative, technical and journal; all are aimed

at carrying out their part in the Society's objectives. The most important administrative committee carries the title of Governing Board. The general business of the Society is the business of this committee's members, who are the Society President, the last four past presidents, the other elected officers, and three members elected at large each year. This Governing Board is ably assisted by committees on Education, Literature Review, Membership, Program, Nominating and Election, Referee Board, Smalley Foundation and such special committees as needed.

The Referee Board and Smalley Committee are unique in their activities. The Board certifies qualified chemists as referee chemists for the purposes of analyzing oils, seeds and meals for those industries not equipped, or for settling disputes on analysis concerning a buyer and seller. The Smalley Committee conducts a cooperative check analysis program and rates the analytical work of the various laboratories involved. Performance proficiency certificates are awarded by the Society to the laboratories doing the best work. The Referee Board uses the results obtained by the Smalley Committee in judging the analytical efficiency of a laboratory and in deciding whether or not it shall be certified.

The technical committees vary in number to fit the needs of the organization. The work of all of these committees is coordinated by the Uniform Methods Committee, which recommends to the Governing Board the appointment of new committees and reviews the work of those in activity. It is the responsibility of this committee to recommend to the Society, in convention, any new methods or any changes in old ones which should be placed in the Analytical Methods of the organization. The AOCS Methods are available to anyone who desires to use them.

Technical committees of long standing are Bleaching, Cellulose Yield, Fat Analysis, Glycerine Analysis, Color, Refining, Seed and Meal Analysis, Soap Analysis, Soapstock Analysis and Spectroscopy. As can be seen by their descriptive names, each committee is working on problems peculiar to the oil and fat industry. Problems may be of short duration, or may last for several years during which hundreds of cooperative samples may be analyzed. There are several hundred individuals doing committee work. These members come from industrial plants throughout the United States, Canada and as far away as England.

The journal committees, Journal, Abstracts and Advertising, function in the publishing of the Journal of the American Oil Chemists' Society. Publications of the Society began in 1917 as news items in the Chemists' Section of the Cotton Oil Press. In July, 1924, the first issue of the Journal of Oil and Fat Industries was published by the Society. In 1932 the name was changed to Oil and Soap, and in 1947 to its present title, Journal of the American Oil Chemists' Society. Included in the Journal are papers on oil, fat and soap technology, news items of interest to members, abstracts of papers from other journals of patents, as well as committee reports and convention news. Circulation is world wide and a credit to the Society.

The founders of the Society were mainly interested in cottonseed and

cottonseed oil. During the past 50 years this interest has widened appreciably, the chief fields of interest at present being edible oils, inedible oils, drying oils, soaps and synthetics. During this period of time the tremendous growth of the soybean oil industry, coupled with the limited use and experimental work done on other oil seeds, such as safflower, sesame and rape, has increased the problems in the oil and fat industry and brought into the picture such laboratories as the various Utilization Branches of the Department of Agriculture.

The interests of the AOCS members and the industries represented are exemplified by the type of paper appearing in the Journal and the technical committees. In the edible oil field, these papers deal for the most part with seed grading, oil production, refining and bleaching technology, hydrogenation, and the production of plastic shortenings and margarine. Within the past few years a great deal of work has been done on fat composition and keeping quality of the edible oils. Even more recently can be seen widespread activity in the field of nutrition.

Work and papers concerning inedible oils have dealt largely with production and utilization problems. Today, emphasis is being placed on more careful production of fats to enable their use in a wider range of products. While in the past animal oils were used chiefly for soap production, today a large portion of the better grades of tallow and lard are being used in edible products. This has been made possible by the development of a method for rearranging fats of all types.

A large portion of the inedible oils still goes into the manufacture of soaps and detergents. In the soap field interest is still centered on processing and analytical problems. Problem types have changed somewhat with the advent of the continuous soap making process and the disappearance of the soap kettle. However, problems do remain, particularly in the glycerine production field, where competition is much stronger due to the appearance of synthetic glycerine on the market. Problems in the synthetic detergent field are in their infancy. So far as the American Oil Chemists' Society is concerned, probably methods of analyses and processing problems are of primary importance. Research on detergents will continue to be of increasing importance and will be reflected in the interest of the members and the types of papers published.

Although drying oils represent a small segment of the total fatty oil industry, problems do exist and are discussed in the Journal. These problems are concerned primarily with the composition of the oils used, their production and utilization.

In addition to the Journal of the AOCS, two other activities are paramount in the work of the Society. The first has been discussed briefly in connection with the work of the Uniform Methods Committee. It has to do with the preparation, maintenance and distribution of a standard book of Analytical Methods. These methods represent the recommended procedures of the technical committees of the Society and are available to anyone who desires them. They are, for the most part, the procedures used by the National

Cottonseed Producers' Association and the National Soybean Processors' Association for the trading of cottonseed and soybean oil. The second activity is very recent, consisting of a short course which deals with subjects pertaining to the fat and oil field and which has been put on in cooperation with well-known universities throughout the country. This course, dealing with such matters as processing problems, analytical problems, fat production, etc., is taught by experts within the Society and covers a period of one week. The purpose of the course is to disseminate information, particularly to new men already in the field and to students who plan to work in the fat and oil industries.

AOCS believes in cooperation with the other technical societies, especially those having similar interests and similar methods of analyses. AOCS representatives can be found in the activities of the American Association for the Advancement of Science, the National Paint, Varnish and Lacquer Association, National Research Council, American Society for Testing Materials and the Inter-Society Color Council.

At the present time there is a joint ASTM-AOCS committee working on methods of analyses for soaps and synthetic detergents. Of particular interest, however, is the joint effort between AOCS and ISCC dealing with methods of color measurement for transparent materials. For many years, AOCS has sought for a satisfactory procedure for measuring vegetable and animal oil colors for the purposes of trading, processing and color specification on finished products. The Inter-Society Color Council is helping AOCS, and other societies having problems in transparent color measurement, by establishing a committee (Problem 14) charged with the responsibility of work on the colorimetry of transparent materials. The members of this committee are actively engaged in color work in the several societies. It is hoped that the work being conducted on Problem 14 will lead to a system of color measurement that will be directly applicable, not only to the measurement of oil colors, but to the measurement of the color of plastics and other semi-solid materials as well.

R. C. Stillman

BOB & RAY AUTO      Driving home from work, we listen occasionally to the  
LICENSE KIT      Bob & Ray Show on the Mutual Network at 5 o'clock. On  
August 28, Bob & Ray advertised a new Auto License Kit,  
which, we feel, may interest some of our readers. Accordingly, we obtained a copy of the script through the courtesy of Mr. Vic Cowen, director of the show. If any of you wish to order such a kit, we would like to make it clear that we do not handle them - please place your order directly with Bob & Ray, New York.

BOB: Friends---are you getting pretty fed up with the auto licence plates that you receive from your state government? RAY: Do you always seem to get some number that's almost impossible to remember? Something like D-Z-8-4-5-9-2-R? BOB: Or maybe you get C-L-5-2-3-8-6-J. That's a hard one to remember, too. RAY: And what about color combinations? Do you

live in one of those states that always seems to come up with something pretty uninspired like yellow and black---or green and white? BOB: Well, neighbors---you don't have to put up with this shabby treatment from your state auto license bureau for another single day. RAY: No indeed, friends---for we are now offering to the public for the first time the Bob and Ray auto license kit. BOB: This handsome kit contains everything you need to make your own auto licenses in a riot of gay colors. RAY: There'll be no more drab plates for you when you become the proud owner of a Bob and Ray auto license kit. BOB: Instead, your car will be sporting state tags in such beautiful color combinations as aquamarine and ecru---tea rose and burnished gold. RAY: I think my favorite is desert tan and old pewter. That really makes a striking combination. BOB: And don't forget to tell the folks about the numbers. RAY: I surely won't---for with the Bob and Ray auto license kit, you can assign yourself any number that you choose. Something easy to remember like one or six. BOB: I made myself a set of these plates the other day---and I picked the number four. That's always been a favorite of mine. RAY: Well, regardless of your selection, you can be sure of having a license number that's easy to remember. BOB: And---at no additional cost---the Bob and Ray auto license kit contains some wonderful state mottos for your plates. RAY: That's right. Mottos on license plates have become all the rage these days. And with the Bob and Ray kit, you can have a motto that will really attract the attention of other motorists. BOB: For example, you might like this one:--- "Land where the bison roam." RAY: Or here's another good one:--- "The milkweed state." BOB: There's another one here in the kit someplace that I was particularly fond of. Here it is. "Birthplace of Joshua C. Redfern." RAY: Or maybe you prefer one of the old stand-bys like "Think" or "Smile." BOB: Whether your tastes lean toward the conservative or the flamboyant, you'll find the perfect motto in the Bob and Ray kit. RAY: And the wonderful part is that this kit probably costs a good deal less than your state government is charging for legitimate license plates. BOB: It's an opportunity that you can't afford to miss. So why not get your order in the mail today? Just address Bob and Ray---New York. RAY: That's the only address you need. We had hoped to get a post office box number. But, of course, the government wouldn't give us one for a fly-by-night scheme like this. So just make it Bob and Ray---New York.

DID PINKE EVER PINK  
A PINK JACKET?

A letter from Waldron Faulkner contained the following postscript:

"This morning the Washington Post printed a picture of a group of people at a hunt ball. The caption said, '... Many of the gentlemen wear the scarlet livery of the Hunt Staff called "Pink" after a famous British tailor named Pinke, who designed the pink hunt jacket.' Do you know anything about this? I tried to look it up in the dictionary and encyclopedia without success. I supposed that hunting 'pink' had a far-fetched connection with scarlet. The Britannica says that the use of 'pink' for the color is taken from the name of the plant. Also that 'the etymology of "pink" is disputed; it may be connected with "to pink," properly to prick or punch holes .... hence to cut a pattern in the edge of the material. The flower has jagged edges to the petals.'"