

## PHYSICS

# Standardized Colors

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➤ FOLLOWING the Victory bicycle and the Victory typewriter, one of the newest subjects of standardization is color itself.

The new war standards to specify and describe color were explained at a conference of the American Standards Association, by Dr. Deane B. Judd, physicist of the National Bureau of Standards, Prof. Arthur C. Hardy of Massachusetts Institute of Technology and Dr. Lloyd Jones of Eastman Kodak Company.

While research technicians have been measuring color by means of spectrophotometers for almost half a century, said Dr. Judd, there was no public agreement on how colors should be described. The shade known to colorimetrists as "9YR 7.2/4.5", for instance, might be called orange by the housewife, apricot by the dress manufacturer, yellow by the paint industry, and red by the druggist.

The new standards adopted in June include a system for designating 319 colors with consistent names, based on the Munsell Color Standard. According to this system, worked out by Dr. Judd and Kenneth L. Kelly at the National Bureau of Standards, "9YR 7.2/4.5" will henceforth be called "weak orange" for practical purposes, since it falls within that range. While theoretically the human eye can distinguish about ten million different colors, 319 names are ample for everyday purposes. But for specifying color, or when a more precise description is required, technicians will continue to use numbers.

The color on the SNL cover this week is brilliant green, about 4G 5.9/8.5.

This standardization of easily understood names such as reddish brown, olive brown, olive green, etc., was originally undertaken to meet the needs of drug chemists and pharmacists. But now that it has been adopted as a part of the American War Standards for color it will be a boon to practically all industrialists and merchants, including of course the ultimate consumer. Adopted by the Textile Color Card Association, the term "pinkish grey" will mean more to clothing buyers and wholesalers than "Algerian sand." However, consumers will doubtless continue to buy

Algerian sands and Morocco scarlets, since the new specifications make it clear that they are not intended to replace names used in sales promotion.

The new standards coordinate these four principles of color specification and description:

1. The spectrophotometer shall be recognized as the basic instrument of color standardization.

2. Specifications shall be derived from the color system adopted in 1931 by the International Commission on Illumination.

3. For the popular identification of color, material standards shall be used according to the Munsell system.

4. A descriptive name, derived from the Munsell notation, is recommended wherever general comprehensibility is desired and precision is not important.

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## LANGUAGE

## Mine of Linguistic Science in Scattered Literature

➤ A MAJOR source of materials for use in the study of North American Indian languages, until now unavailable to scientists, exists in scattered publications and manuscripts used by missionaries in their work through the immense territory stretching all the way from Labrador to the Pacific coast and north to the last inhabited islands of the Arctic. At the meeting of the American Philosophical Society in Philadelphia, P re Arth me Dutilly, missionary-scientist of the Oblate Missions and the Catholic University of America, described this hitherto neglected scientific resource and told what he is doing to round up the scattered material.

Missionaries of all creeds make more of an effort to learn the language of the tribes they work with than do traders, explorers and officials, the speaker declared. They stay longer with the people, and have more difficult subjects to discuss.

From the very beginning of the Northern missions, P re Dutilly continued, priests and ministers have made a practice of reducing the languages of the



**PRIZE PICTURE** — This photograph of a Red Cross Nurse's aide bathing a baby in Bellevue Hospital, New York City, received an award in the American Red Cross photograph contest.

various tribes to writing. There are several special systems for expressing the Indian languages, one or two of them very successful. In these written forms, the missionaries have produced translations of the Bible, prayer and hymn books, catechisms and other things they needed for their own work. Most of them are not generally known; some have never even been printed, but exist only in mimeographed form, perhaps with the amendments and marginal notes of several different workers on them.

P re Dutilly, who has just returned from his tenth summer in the Far North, has undertaken to get all such materials together, making possible their reproduction in forms useful to students of languages. So far, he has assembled 145 published works and reproductions of 52 unpublished manuscripts, representing 21 distinct Northern Indian languages and dialects, plus Eskimo. This work has been sponsored by the American Philosophical Society.

The past summer's trip was a "short" one for P re Dutilly, taking him only as far as James Bay, where he worked in the Cree and Montagnais Indian areas. His principal interest is in botany, and he brought back a collection of something over 1,200 sheets of pressed plants.

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