each in the third group the same daily quantities of both of the above compounds. Achromotrichia occurred in these three groups as well as it did in the larger basic experiment with the same difference in the reaction of males and females.

These observations imply that the achromotrichia produced in C-57 mice by certain dietary deficiencies may depend also on hormonal factors.

The report of Forbes[2] that a pellet containing estrogenic substances implanted subcutaneously produced local pigmentation of the fur in albino rats, while testosterone diproprionate failed to do so, is of interest in connection with these results.

B. GERSTL

SCHOOL OF MEDICINE,
YALE UNIVERSITY

B. LUSTIG
A. R. GOLDFARB

LAWRENCE RICHARD BRUCE,
BIOCHEM. & RESEARCH LABOR., INC.
STAMFORD, CONN.

CONGENITAL AND ACQUIRED ANOMALIES OF COLOR VISION

APROPOS of recent criticism in these columns of the ambiguous concept of "color blindness,"[1] subsequently endorsed and extended by Loken and Dunlap,[2] I find after careful consideration nothing in common between the assumptions and deductions of the latter and my own.[3]

Controlled experimentation over a period of months and years will be necessary before the existence of congenital as distinct from acquired types of color anomaly can be contested.[4] Such experimentation should be carried on by responsible trained workers, combining medical with psychological techniques. Adequate insight into the uses and shortcomings of the various color tests available, based on five or more years of experience with a variety of cases, is indispensable. Ability to distinguish minor from major anomalies, a knowledge of the relations of day and night vision, of the effects on the color sense of fatigue, of excessive use of nicotine, alcohol and other drugs, and of various infections are also essential.

Promotion of the use of drugs or vitamins to enable an applicant for aviation or naval service to "pass a test," where knowledge of the permanence of the "cure" is not yet available in the opinion of the writer is little better than coaching students to cheat in a qualifying examination. In the present emergency, when perfection of vision is vital in submarine, aviation and naval branches, and when one of our opponents is undoubtedly possessed of unusual visual equipment, the ill effects of such a line of action are incalculable.

There is nothing in common between the Loken-Dunlap position and my own.[5]

ELSIE MURRAY

LABORATORY OF PSYCHOLOGY,
CORNELL UNIVERSITY,
ITHACA, N. Y.

SPROUTING OF SUMAC IN DRY STORAGE

SPROUTING of adventitious buds in logs or twigs of woody species freshly cut and left in contact with moist earth is said to be common in tropical regions and not rare in temperate climates. The remarkable case of a sprout on a mulberry log in England after six years of dry storage has been recorded by the late Sir A. W. Hill,[1] but in that instance the sprout appeared after the log had been used as a prop with one end in contact with moist earth. The scriptural record[2] of the sprouting of the rod of Aaron has, of course, been familiar to many generations of men, but comparable cases in North America are not so well known. A recent development of sprouts on a stored log of staghorn sumac (*Rhus typhina* L.) although a slower proceeding than that of the biblical account is so striking as to seem noteworthy:

A sumac tree 5 inches in diameter at the base and reaching over 20 feet in height growing in the writer's yard (elevation, 320 feet) in Arlington County, Va., was cut down on September 1, 1941, and the log 12 feet long stored for curing as lumber in a dry unheated shed, where it had no direct contact with moisture for the next eleven weeks. After two weeks a number of buds and small sprouts were observed, chiefly on the basal half of the log. Four weeks later all except two of the sprouts had aborted. The larger sprout, then reaching eleven inches in length, originated at a point fifteen inches from the base of the log; the other, but 3 inches long, was at a point five feet from the base. After five more weeks, *i.e.*, eleven weeks after the log had been cut, but one sprout, the lower one, remained, it having by that time reached sixteen inches in length with a maximum diameter of seven sixteenths of an inch. By this time, November 17, some of the leaves had begun to wither at the tips, but whether from dryness or from the effect of cold was not readily determinable.

It does not seem profitable here to discuss at length the means whereby the sumac stored sufficient water for the eleven weeks' growth and transpiration. But it may be pertinent to point out that the much split

2 T. R. Forbes, *Endocrinology*, 30: 465, 1942.
1 E. Murray, SCIENCE, 96: 2484, 133–5, August 7, 1942.
2 K. Dunlap and R. D. Loken, SCIENCE, 96: 2489, 251–2, September 11, 1942.
3 *Idem.*, SCIENCE, 95: 2474, 554 *ff.*, May 29, 1942.
4 See Köllner, "Die Störungen des Farbensinnes," 1912; or other ophthalmological texts.
5 E. Murray, *Psychol. Bull.*, 39: 165–72, March, 1942.
1 A. W. Hill, *Ann. Bot.*, 39: 210–211, ill., 1925.
2 Numbers, Chapter 17.