of swelling there appeared a total opacity of the lens cortex with degeneration of the cortical fibers, but the lens nucleus retained its crystalline transparency. It was clear that inadequacy of the basic milk diet had produced the disease, because it was lacking in other larvae from the same egg-masses fed on a series of synthetic beef muscle diets. Ten animals from the milk-fed groups had visible cataracts when changes were made in the rations. Increase of vitamin A or of vitamin G was ineffective in preventing development of the disease; nine new cases of the eye defect appeared. In another group of larvae fed on one of the milk-powder-casein diets, one case of cataract was developing when dietary addition was given. With purified cystine as food supplement and no change in the vitamin supply, the other members of this group remained free from the eye opacity.

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THE NORTHWEST CONIFEROUS CLIMAX

IN a recent note[1] the assumption is made that the coniferous climax of the Pacific Northwest can be attributed to the winter activity and hence the longer growing season enjoyed by the coniferous evergreens. The writer has no quarrel with the possible importance of length of growing season and consequent total growth as a factor in determining the climax forest (though Hemenway's evidence must be made quantitative as well as anatomical before the relative influence of winter activity on rate of growth can be properly evaluated), but does wish to protest the total disregard in the above note of other important ecological and physiological factors. Differences in longevity, seed production, resistance to injury and disease, and ability to germinate and survive under heavy shade and severe competition are some of the factors that must be considered along with rate of growth in any sound explanation of the resultant climax.

In the opinion of the writer, Hemenway is not justified, without due consideration of such factors, in assuming that the coniferous climax in the Northwest can be explained predominantly upon winter activity in the evergreen conifers.

I. T. HAIG

U. S. FOREST SERVICE
MISSOULA, MONTANA

REPORTS

APPROPRIATIONS FOR GRANTS-IN-AID BY THE NATIONAL RESEARCH COUNCIL

THE Committee on Grants-in-Aid of the National Research Council at its December meeting, out of 119 requests, made thirty-six grants for the support of research projects, as follows:

PHYSICAL SCIENCES

Mildred Allen, associate professor of physics, Mount Holyoke College, "the effect of tension on the electrical resistance of single crystals"; Richard A. Beth, assistant professor of physics, Worcester Polytechnic Institute, "detection of photon spin, in accordance with the quantum theory of light, by direct mechanical means"; John H. Clouse, professor of physics, University of Miami, "x-ray crystal structure"; J. M. Cork, associate professor of physics, University of Michigan, "nuclear disintegration under high potential"; Curtis R. Haupt, assistant professor of physics, Pomona College, "ionization of mercury vapor by electron impact"; Otto Struve, director of the Yerkes Observatory, and C. T. Elvey, assistant professor of astrophysics, Yerkes Observatory, "measurement of accurate contours of the absorption lines in B and A type stars"; Benjamin A. Wooten, professor of physics, University of Alabama, "energy distribution in certain nebulae and stars having continuous spectra."

ENGINEERING

H. Diederichs, director of the Sibley School of Mechanical Engineering, Cornell University, "heat transmission coefficients for steam in condenser tubes."

CHEMISTRY

John G. Aston, assistant professor of chemistry, Pennsylvania State College, "the heat capacities of simple organic compounds"; Simon Freed, instructor in chemistry, University of Chicago, "magnetic optic problems of crystals"; W. D. Harkins, professor of chemistry, University of Chicago, "the force constant for atoms of ordinary and heavy hydrogen in compounds"; W. George Parks, assistant professor of chemistry, Rhode Island State College, "the e.m.f. method for determining heats of dilution"; Milton J. Polissar, assistant professor of physics and chemistry, Armstrong College, "studies of chemical kinetics"; L. H. Reyerson, professor of chemistry, University of Minnesota, "preparation of gases of the methane series with the heavy isotope of hydrogen."

GEOLOGY AND GEOGRAPHY

George H. Anderson, research fellow in geology, California Institute of Technology, "alternations and replacements occurring in a granite batholith in the Inyo-White Mountain Range of California-Nevada"; Elmer H. Johnson, industrial geographer, Bureau of Business Research, University of Texas, "physical and economic characteristics of natural areas of the southwest Gulf region"; Christina Lochman, Chicago, Illinois, "the fauna of the Upper Cambrian Cap Mountain formation of Texas"; Edwin T. McKnight, associate geologist, U. S. Geological Survey, "igneous complex at Prospect

[1] Hemenway, SCIENCE, 78: 437.