

conducted; (ii) to attract instructors who, by reason of inclination and ability, wish to divide their time between research and teaching.

3) It is not necessary under these circumstances that all instructors be researchers.

4) Due recognition being given to the contribution that research makes to education, all faculty members should be evaluated on the basis of their contributions, made in various ways, to the primary mission: education.

My own undergraduate experience of a decade ago tends to bear out Allen's contention; the better teachers on that level were not deeply involved in research. At any rate, an attempt to find the proper place for research in a college is not at all helped by broad claims for the essentiality of research.

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Differentiation of Basaltic Rock

In his excellent article on granite, Walton [*Science* **131**, 635 (1960)] discussed the problem of deriving granitic rock from a parent basaltic magma. He summarized the classic ideas on processes of magmatic differentiation, and he elaborated on mechanisms for selective mobilization of certain rock-forming components under high temperatures and pressures. As he noted, the components at the apex of Bowen's reaction series will be selectively mobilized in the presence of high pressure of water vapor and temperature of about 700°C. This is the means by which granitic rock tends to be formed at the expense of other rocks. His statement, however, neglected a consideration of differentiation at the surface of the earth; and yet this is a fundamental part of the geologic cycle.

Surficial processes of weathering, erosion, transportation, and deposition accomplish a differentiation of rock-forming components. Some of the products of weathering of, for example, basaltic rock, are carried in solution or colloidal suspension, and others are carried as detrital particles. The resulting sediments include cherts, iron oxides, carbonate rocks, evaporites, and detrital sediments, with hydrated clays and connate water. There may be a geographic concentration of some of these deposits in some places and others in other places.

Nonetheless, the total complex of materials that accumulate in a geosyncline should approximate the total complex of materials eroded from the source region. But, the rock-forming components are arranged differently in the sediments than in the source rocks;

and with geosynclinal downwarping to zones of higher temperature and pressure, the now-unstable components in the sedimentary rocks will react more readily to selective mobilization than will the components in basaltic rock. Thus, in one or more geologic cycles, granitic rock can be derived from basaltic rock, through surficial processes followed by plutonic processes.

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I welcome Baldwin's commentary, which adds another perspective to my review of "Granite problems." He and I studied together under that staunch magmatist S. J. Shand, who was wont to remark that sediments bear the same relationship to rock as sawdust does to the living tree. Shand said it with an ironic twinkle in his eye, and yet there were overtones of the traditional "hard-rock" school, which tended to regard weathering and sedimentation as the terminus of the rock-forming process rather than a stage in a major geochemical cycle. If, in not dealing explicitly with this broader aspect of the problem, I betrayed relics of a "hard-rock" bias, I am glad it is an old Shand man and fellow student who puts the matter straight.

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Evaluating New Drugs

I would like to point out one error in the article on drug hearings [*Science* **131**, 1299 (29 Apr. 1960)]. It is stated that at the present time physicians have no convenient index for evaluating pharmaceutical products except for the printed information from the various drug manufacturers.

In 1959 the bi-weekly *Medical Letter* began publication. This is a publication of Drug and Therapeutic Information, Inc., 136 E. 57 St., New York 22. The *Medical Letter* is a nonprofit publication having as its aim the dissemination to the medical profession of information concerning manufactured drugs. It has an editorial board of university faculty members who advise, through the medium of this publication, what is a valuable addition to the therapeutic armamentarium and what is not. The board of editors also frequently points out differences in the costs of similar products, comparing the prices of drugs under generic and trade names. This publication is available on subscription.

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Meetings

Southwestern and Rocky Mountain Division

The Southwestern and Rocky Mountain Division of the American Association for the Advancement of Science held its 36th annual meeting in Alpine, Tex., 1-5 May 1960.

Members of the division were special guests of Sul Ross State College at ceremonies for the dedication of the new Science Building on 2 May. Later that day Chauncey D. Leake, president of the AAAS, delivered the opening address of the meetings, speaking on "Communications among scientists in relation to the unity of science." Dael Wolfe reported on the general activities of the Association.

Programs of the sections of the division included 48 individual papers. Two symposia consisting of invited papers were conducted. One of these, extending through two sessions, was sponsored by the division's Committee on Desert and Arid Zones Research. It was presented by eight specialists in the fields of agriculture and forestry and dealt with problems of water yield in the Southwestern United States. In the other, the fifth in a series of symposia on the improvement of science teaching, curriculum studies in the fields of science were discussed. Members of each of the curriculum study groups were present to conduct these discussions.

The division's annual John Wesley Powell memorial lecture was presented by Knox Taylor Millsaps, chief scientist, Air Force Missile Development Center, Holloman Air Force Base, who spoke on fluid flow in circular pipes.

Retiring divisional president Lora M. Shields, professor of biology of the New Mexico Highlands University, delivered the presidential address, entitled "No life for a lady."

Members in attendance were special guests of the McDonald Observatory, on Mount Locke, on one evening during the meetings. The observatory staff very graciously set aside their regular observation program to demonstrate the 82-inch refractor telescope and to give the visitors a view of the heavens such as few of them had ever seen before.

The final day of the meeting was devoted to a field trip into the Big Bend National Park. Under the direction of park naturalist Harold Broderick, the group was able to observe many of the interesting geological features of the area, and with the desert flora in full show, the botanical observations were equally interesting.

Newly elected officers of the division include Alan T. Wager (Arizona State University), president; Anton Berk-