

to produce the ore was concerned. An indifferent copper market and metallurgical difficulties, however, resulted in a decrease in the output for 1910 for several districts. The Survey's estimate on January 2, 1912, indicates a copper output for 1911 greater than that of 1910 and nearly equal to the record production of 1909. It is further stated that most of the companies are now in a position to maintain or even increase their present output, so that, if the consumption of the metal will permit, the production of copper in the United States for 1912 may be expected to show a marked increase. It is noteworthy that not one of the leading copper districts of the United States, several of which have been active producers for 30 years or more, has been worked out or shown a decrease in its ability to produce copper.

UNIVERSITY AND EDUCATIONAL NEWS

AN anonymous gift of £100,000 has been made toward enabling the University of London to acquire a site north of the British Museum. The university has also received £60,000 from the Draper's Company for a senate house and administrative offices.

AN anonymous donor has undertaken to give £20,000 to the University of Cambridge, to establish a chair of genetics, to be called the Balfour professorship of genetics, in honor of Mr. A. J. Balfour.

THE nomination is announced of Dr. Edward H. Bradford, A.B. (Harvard, '69), professor of orthopedic surgery, to be dean of the Harvard Medical School.

PROFESSOR GEO. M. REED, of the University of Missouri, will have charge of the botanical work in the New York University during the summer session of 1912.

PROFESSOR H. A. WADSWORTH, of the department of forestry, University of Idaho, has resigned to accept a commission in the United States army. Mr. Erwin W. Cook, B.S. (Washburn), M.F. (Michigan), has been appointed instructor in forestry at the university. He has been forest assistant on the Salmon (Idaho) National Forest for the past two years.

DISCUSSION AND CORRESPONDENCE

PRINCIPLES OF WATER-POWER DEVELOPMENT

TO THE EDITOR OF SCIENCE: In presenting "Another View of the Principles of Water-Power Development,"¹ Professor Aldrich illustrates his idea of individual ownership of water in part by the pronouncement, "A man owns the water in his well, we all believe." He utterly ignores the case (occurring with increasing frequency as population and industrial use of water advance) in which the sinking of a larger or deeper well in the neighborhood robs the earlier well of its supply; and he equally ignores all other of those physical facts and relations concerning water which are of growing consequence and complexity as the uses of this primary resource increase and multiply.

Professor Aldrich illustrates his view of equity in the use of water by reference to power development at Shoshone Falls and Twin Falls, and declares that the only "part of the people" of the United States equitably interested in this use are "simply those who live within the range of power transmission, and are not more accessible to another source of power." He utterly ignores the paramount uses of water for domestic supply and the production of food; he ignores the patent fact that each year and each decade more and more of the water of Snake River is removed for these paramount purposes, and the certainty that within a generation practically all the water of Snake River valley will be consumed for these paramount purposes, leaving only a sufficient flow for natural sewerage with incidental power development and navigation; and he equally ignores the broad fact that "the people of Cape Cod, or of Washington, D. C.," who consume bread and beet sugar and other products of Snake River valley, have a most real interest in such utilization of the waters of that river as will best promote normal production and industrial development—i. e., as will best contribute to the general welfare. Perhaps the clearest indication of Professor Aldrich's no-

¹ SCIENCE, March 1, 1912, pp. 338-340.

tion as to equities in water appears in the pronouncement that under common ownership "the general government should collect as a tax" on all users of water amounts which may be defined broadly as corresponding to the railway standard of "what the traffic will bear"; he ignores the fundamental economic principle that while common ownership implies the right to impose conditions of distribution and use, it involves primarily the obligation to minimize taxes or other costs of distribution in the common interest.

In pointing his views as to the finality of legal relations already developed in the west, Professor Aldrich declares, "Every western state has voluminous laws on the subject, and ten times more voluminous legal decisions on those laws." Were his familiarity and sympathy with the west still greater than he professes, he would realize that the Idaho water law is better than that of Wyoming after which it was modeled, that the later Oregon law is still better, and that the California water law enacted a few months ago is the best of all, since with each passing year growing knowledge as to physical facts and relations, increasing population and industries, and concurrently advancing standards of equity fall into closer accord—indeed he would realize that the very principles he criticizes are the outcome of experience in the west, where the natural water supply is so meager that it is necessarily measured and apportioned and utilized more carefully than in any humid land, and might even learn that the proposition *All the water belongs to all the People* was first crystallized and expressed through the National Irrigation Congress (an essentially western organization, made up of western men, dominated by western ideas) at a meeting in Spokane wherein the preponderating representation was from Washington, Idaho, Montana and Oregon.

To those unfamiliar with the situation it may be of interest to know that two opposing views concerning the administration of water and other resources have come up in the western states; the formerly prevalent but now minority view is that the resources shall

be exploited for the private profit of those who acquired possession before their value was realized; the later view, already held by the great majority, is that the resources shall be developed, conserved against needless destruction, and utilized in the common interest, under customs and laws established primarily by communities, secondarily, by states, and finally, as need arises, by the federal government. On these opposing views Professor Aldrich contributes polemics, which may be needful pending more specific knowledge; but it is to be regretted that he does not contribute a fact, a figure, a principle, or any other iota of that definite foundation on which alone scientific discussion may fitly rest, and on which sound legislation may eventually be erected—unless, indeed, he is right in his remarkable main contention that the western states, commonly considered the most actively-growing part of the country, are already so bound by statutes and decisions that further progress is impossible.

W J MCGEE

DR. RADOSAVLJEVICH'S "CRITIQUE" OF PROFESSOR
BOAS

TO THE EDITOR OF SCIENCE: The number of the *American Anthropologist* just issued from the press (Vol. 13, 1911, No. 3) contains an article by Dr. Paul R. Radosavljevich entitled "Professor Boas's New Theory of the Form of the Head—a Critical Contribution to School Anthropology" (pp. 394-436). The admission of such an article into a respectable scientific journal seems to have resulted from a misapplication of the praiseworthy editorial principle that no student, however high his professional standing, shall be exempt from the most rigorous criticism on the part of the least of his fellow-workers. In the present instance, however, we have to deal not with a critique, but with a lampoon. The extraordinary character of Dr. Radosavljevich's paper requires an immediate reply, especially in view of Professor Boas's protracted stay in Mexico. Without desiring to forestall a fuller rejoinder by those more