

Falling Mountain in 1917 was still reacting from subterranean pressure and another mountain fifteen miles to the eastward was also sending down avalanches of rocks. The presence of the lava plug Novarupta upthrust 200 feet above the floor of the upper end of the valley in 1912 is another bit of evidence that the activity of the valley is not of a secondary nature.

No other volcanic region in America offers such an opportunity for the study of the products of volcanic activity as does this. The vents are easily approachable, the gases are issuing under pressure and are not in equilibrium, the salts within many of the vents are anhydrous due to the high temperature of the issuing gases. Sublimates are in evidence every where. The valley will be a fertile field of investigation alike for the geophysicist, geologist, chemist and mineralogist. It is to be hoped that the preliminary work already commenced will be prosecuted vigorously so that nothing will be lost through the lapse of time.

The setting apart of this valley as a national monument is a fitting climax to the expeditions of the National Geographical Society and to the persistent and untiring efforts of Dr. R. F. Griggs, director of the Katmai explorations.

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QUOTATIONS

THE CONDITIONS ATTACHED TO GOVERNMENT GRANTS FOR SCIENTIFIC RESEARCH IN GREAT BRITAIN

MAY I again direct attention to the conditions under which grants are made to individual research workers by the Committee of the Privy Council for Scientific and Industrial Research (London: H.M. Stationery Office, 1919. Price £6)? The matter is of some importance, as not only are those who refuse to accept these conditions debarred from participating in the grants made from the public purse for scientific research, but other sources which used to be available, and to which such conditions were not attached, are also being cut off. I

understand, for example, that the Carnegie Trust for the universities of Scotland intends very largely in the future to discontinue its grants in aid of research, and to refer applicants to the government.

By accepting a grant under these conditions, a research worker undertakes not to publish his or her results without the consent of the committee, and gives up the ownership in the commercial rights of his discoveries, which otherwise, under the patent law, belong to him. It is the committee, not the inventor or discoverer, that is to determine to what extent and in what proportion the committee and those who have made the discoveries are to secure the ownership of the results by patent, presumably on the ground that the committee has provided the funds for the research. If that is the ground, ought not the committee to state precisely what is the share it claims, whether the share is limited to the amount of the monetary contribution, or if it intends to make a profit? I understand the money was given by Parliament to foster research, not to exploit it. As it is, a worker accepting a grant places himself absolutely, as regards the legal right to his own property, in the hands of a committee, and if, as is bound to occur, differences arise as to what is the share of the discoverer or who is the discoverer, the matter is not put into the hands of an impartial arbitrator to settle, but is settled by one of the parties in the dispute. In precisely the same way, with existing secret patents, if a dispute arises between a patentee and the government, it is the treasury, who pays for the use of the patent, that settles the dispute.

The condition is justified on three grounds. First, on the ground of national interest, especially in the present abnormal circumstances, and that it is not in the national interest that results of commercial value should be made available to other countries to the detriment of our own. As regards actual war conditions, patents containing any information likely to be of use to the enemy have not been published, so this is secured independently of the question of the ownership of the patent. As regards the future, one is justified in ask-

ing whether it is the intention of the committee that the results of researches obtained by the expenditure of national funds should be kept secret, as most scientific men would regard this as short-sighted.

The second ground is that, where results are to be patented, delay in publication is in the interest of the investigator. This is scarcely relevant. It is surely in the highest degree dangerous to delay applying for a provisional patent until the results have been communicated to the committee and its consent obtained, for any person who, by lawful or unlawful means, gets the information is then in a position to prevent the real discoverer from protecting himself.

The third ground is that it is the object of the department to secure to the discoverer a fair share in any profits that may accrue from his discovery. Admittedly, the class of inventors and discoverers is in very great need of being protected from the sharp practises that have sprung up under the shadow of the patent law, and primarily from the government itself. But why should a small part of them, who receive government funds, be singled out and protected? If the discoverer prefers to secure for himself the legal ownership of his discoveries, rather than from the committee, I do not think he should be debarred from participating in this money. The most, I think, the committee has a right to stipulate is that its interest is limited to the amount it has contributed, and that, in the event of a dispute, the matter shall be referred to an impartial arbitrator for settlement.—Frederick Soddy in *Nature*.

SCIENTIFIC BOOKS

Zoologica. Scientific Contributions of the New York Zoological Society. Volume I., 1907-1915, 436 pp. 8vo, with 138 illustrations. Published by the Society, The Zoological Park, New York.

In 1906, after the New York Zoological Society had advanced its two primary objects, namely, the establishment of a great zoological park and aquarium, it entered more seriously upon its third chief object—the pro-

motion of zoology through exploration, research and publication. Two volumes have already been published, namely "Tropical Wild Life," studies from the Tropical Station of British Guiana, and "A Monograph of the Pheasants," Volume I., by C. William Beebe. The present volume is the third to be issued; it contains twenty bulletin papers which have been published by the society beginning in 1907, and here brought together in permanent form.

The members of the scientific staff of the park and of the aquarium did not enter the well-trodden field of the lifeless cabinet or museum animal, nor of the older systematic or descriptive zoology, nor even of the newer field of experimental zoology and Mendelism; they sought the inspiring field which has been relatively little entered in this country or abroad, namely, observation of the normal living bird and the living mammal, wherever possible in its own living environment, not from the standpoint of the older naturalists or systematists, but from the standpoint of the newer problems raised in modern biology. This is a path partly pursued by certain of the older naturalists and travelers, and especially by such wonderful observers as Darwin, Wallace and Bates, which has been abandoned for a time through the lure of artificial experiment and of the breeding pen, but which may now be followed with the new ardor of a larger knowledge of the problems and of a deeper insight into the search for natural causes. These causes are sought either in the experiments which nature herself is constantly trying, or in a close imitation of the actual experiments of nature, as in Beebe's studies of the causes governing the changes of plumage and of color in the scarlet tanager (*Piranga*) and the Inca dove (*Scardafella*).

The work of Beebe, contained in the opening article of the volume, entitled "Geographic Variation in Birds," describes his initial experiments and observations, which are continued in a later paper, "Postponed Moults in Passerine Birds." In brief it is the normal and natural phenomena which are being investigated. In midsummer he placed several