zens. So far all agree that the present legal relations could not be improved; they are substantially ideal.

How about water for irrigation? Prior use is the determining element in ownership, according to the laws in all the western states, and continuity of use is the element which perpetuates the title. This is the simplest possible plan, and taken all in all is the most feasible one, and works as little hardship as any.

Now about water for power. This is the "nub" of the whole matter for the conservationist, and is probably all that Dr. McGee had in mind in enunciating his principle, which seems so fundamental to him as to be "axiomatic," "incontrovertible," and even (principle 38) "a part of the body of ethical conviction underlying American character and constituting its strength." In the face of these overwhelming assertions, I will undertake to maintain that the people as a whole have no interest whatever in any specific water power. A portion of the people are in each case interested, those who are in a position to make a reasonable use of the benefits of the power, but the rest have no right whatever to claim a share by taxing those more favorably situated with reference to this particular power site. To illustrate: the Snake River in southern Idaho has several large falls, principal among them being Shoshone Falls, with Twin Falls second. These have been partially developed, and a large amount of power, light and heat can be obtained from the present installation. Now what part of the people of the United States are equitably interested in what is being done here? Simply those who live within the range of power transmission, and are not more accessible to another source of power. These people, in a very real sense, have an interest in that water power, and have a right to be protected from extortion by the laws of the state, and as a matter of fact they have a recourse in the constitution of Idaho. But the people of Cape Cod, or of Washington, D. C., have no equity in Shoshone Falls, and no right to expect dividends from its successful development. This is not only ideally sound in principle, but it is recognized in law and embedded in the whole organization of state and nation.

Differences of opinion in regard to policies of conservation have had their origin very largely in loose and vague thinking such as is illustrated by Dr. McGee's principles. Not realizing that the west has been facing these problems for decades, and has pretty nearly settled them, a class of theorists in the east has taken up the same subjects *de novo*, treating them as if they had never before been touched by the hand of man and the way were free for any sort of plan to be carried out.[1] I do not accuse all conservationists of being so visionary, but Dr. McGee represents something of an element. It wearies the patience of the people of the west to be obliged to deal with such persons, who have a missionary zeal to teach us things we have always known, and know much better than the would-be teachers, and who would view us as either a set of thieves and robbers or helpless children whom they would protect. Our best reliance is ourselves; we are amply clothed with authority to do all that is necessary; our experience and training have familiarized us with the work ahead; and our purpose is to protect the interests of the public, our own public, ourselves, in all necessary and reasonable ways.

J. M. ALDRICH

FIRST USE OF WORD "GENOTYPE"

I HAVE recently asked Dr. J. A. Allen, the leading authority in this country on nomen-

[1] A beautiful illustration, which I will not charge to Dr. McGee, is in the withdrawal of power sites from entry under the public land laws. It was a great relief to many eastern conservationists when sweeping withdrawals of this class were made a few years ago; but in fact under the laws of Idaho the acquisition of a water power is a process entirely apart from the filing of any sort of entry on land, and the withdrawal did not change the legal status of the power sites by one iota. The mode of acquisition of water power under the laws of the state is precisely the same as before, and I doubt not that the same is true in other western states.

clature, to express an opinion upon the first use of the word "genotype." He writes, January 30, as follows:

I can not give the date of the first introduction of this word to replace the phrase "generic type," but I find it was used as early as 1903, as apparently a word not new. By 1905 it was in common use in discussions of generic types and prior to 1910 it became officially adopted by the International Zoological Commission. I think the first use of the word was by some writer in *Nature* or in the *Annals and Magazine of Natural History.*

The word is derived from the Greek word γένος = kind, genus and τύπος = type. The use of "o" as a connecting vowel seems to be consistent with general usage in such cases. The derivation of "genetic" is given in the Century Dictionary as from γένεσις = generation, genesis.

I will try to trace it to its origin, and, if successful, report again on the subject.

This note by Dr. Allen raises the question as to the use of "o" as the connecting vowel in the term "genotype" proposed by Johannsen. Why not use "e" as the connecting vowel, as in genetic, genesis, etc.? This would obviate the confusion which is bound to arise and persist if the preoccupied term "genotype" is adhered to. It is such a valuable conception of Professor Johannsen's that it seems worth while to have a permanent and undisputed designation for it.

HENRY FAIRFIELD OSBORN
AMERICAN MUSEUM,
February 7, 1912

SCIENTIFIC BOOKS

Grundzuge der Palæobiologie der Wirbelthiere. By O. ABEL, Professor of Paleontology in the University of Vienna. Stuttgart, E. Schweizerbart. 1912. Pp. xii + 708, frontispiece and 470 text illustrations.

This extremely interesting and highly important treatise is in effect a text-book of adaptation among the vertebrates past and present. The subject is, as Doctor Abel observes, the most recent development of paleontologic science. Speculations, indeed, on the habits and environment of extinct animals are as old as the first finding of their fossil remains. But the systematic study of the subject, analysis of the adaptive characters of living animals and interpretation of the adaptation of extinct animals, is a development of the last few years. It requires as its groundwork thorough morphologic study of complete skeletons, which until recent years have been very rarely available among fossils.

The subject is a fascinating one—somewhat speculative in the present stage of its development, for the criteria of adaptation are not yet perfectly worked out or thoroughly tested. But it lends to these dry bones a living interest that a systematic treatment lacks, and a faunal or even a phylogenetic treatment imperfectly supplies. Doctor Abel has given particular attention to this phase of paleontology and his work is authoritative, especially in the field of marine adaptations. The subject is clearly presented and well illustrated.

The volume opens with a sketch of the development of paleontologic method. Then follows a discussion of the causes, conditions and processes of fossilization. The principal portion is devoted to the various adaptations of vertebrates, especially of fossil vertebrates as interpreted by modern adaptations, and a full discussion of the criteria of adaptation in external form and in construction of feet, teeth and other parts. A final chapter discusses the relations of paleobiology and phylogeny.

The analyses of the various adaptive types with their parallel and divergent characters are admirably clear and serve to bring together the latest results of studies in *ethology,* as the study of adaptation is called by Dollo. The illustrations are numerous, well chosen and instructive.

The entire volume is surprisingly free from errors of fact—such criticisms as may be made are in matters of interpretation and theory. Doctor Abel is perhaps a little prone at times to accept the theoretical conclusions of others without sufficient critical sifting of the evidence, and here and there one finds difficulties in reconciling conclusions which in truth are based upon mutually exclusive data.

The volume is crowded with novel sugges-