the Guggenheim Foundation, returned from an eleven weeks' tour of South America on September 6. Dr. Aydelotte and Mr. Simpson went to establish Guggenheim scholarships in Argentina and Chile. The scholarships will allow $2,500 yearly and traveling expenses.

THE University of Wyoming summer school in geology (which is situated in the Medicine Bow Mountains, forty miles from Laramie) on July 26 closed a successful five weeks of field instruction in the geology of the Rocky Mountain Region of Wyoming and Colorado. Forty students, of whom thirty-three were engaged in the advanced course, attended the camp. During part of the summer Dr. H. de Terra, of Berlin, exchange professor of geology at Yale, was a guest of the camp, while regular instruction was provided by Dr. S. H. Knight, director, and Dr. R. H. Beckwith, of Wyoming, and Dr. H. S. Sharp and Mr. W. H. Thomas, of Columbia University.

ACCORDING to Science Service, Death Valley, in southeastern California, may become the newest addition to the lands administered by the U. S. National Park Service. President Hoover has signed an executive order temporarily reserving from entry certain strategic points in and about the valley, pending investigation by the Department of the Interior of its suitability for a national monument. National monuments differ from national parks in that they are usually less developed and less visited, and hence require less elaborate administration and patrolling. A national monument may become a national park when public interest in the area becomes great enough to justify a larger outlay of administrative effort and funds. Many of the present national parks passed through a national monument phase. If Death Valley becomes a part of the U. S. National Park system, it will be an appropriate monument in more senses than one. The late Stephen T. Mather, first director of the U. S. National Park Service, at one time had extensive business interests in the borax deposits of the region, and the present director, Horace M. Albright, was born at Bishop, Calif., on the very threshold of the valley.

DISCUSSION

NOMENCLATURE AND ME

CONCERNING the technique of the naming of animals and plants, Professor Needham has recently[1] pointed out some of the vices of the system, and suggests, as a remedy, a secondary or skeletal system based on and superposed on the expanded Linnean. This secondary system, he admits, would not remedy the vices of the primary. As a morphobiologist I would prefer one system to two. Our real problem is to obviate the exercise of vicious practices on the part of some (let us be fair) systematists. Needham quotes Darwin, who cleverly places his finger on the root of all evil (as did "the Preacher" before him), namely: vanity.

Abstractly, the scientist (and unfortunately, this includes some tyro collection makers) should be impersonal, detached, disinterested. Actually he is a normal, usually quite human being, often with as much of a taint of egoism as others of his species. Our rules and regulations are based on the abstract concept. The result is the humanization of nomenclature. The rules have been taken advantage of by some, and it is just these few that spoil Professor Needham's teaching efficiency.

As a resident afar, dwelling where there are no proper library facilities for checking up on usable generic names, I have reason to know that it is a temptation to make up unimaginable generic and specific names. It is not due to priority (let us be discriminating) that such names are invented, but due to the fact that one's own name may (it always does!) appear after the scientific name if the latter is a new one. Were the "authority" never seen in print, or hardly ever, the temptation would be negligible enough to be counteracted by other considerations.

Another bit of technique is to leave a new genus or species clearly indicated but not named, in the hope that a later worker may name it after its "indicator." Similarly, an author may name a genus or species like a preceding (and "neglect" to rename it although his attention is called to the synonym), trusting that after his death some one will rename it after him. This might be avoided by a rule to the effect that genera and species may not bear the name of a worker. His work (and name in the bibliography) should be enough of a memorial or reward to his ego—and judging from the bewildering number of milestones bearing the same name, along the bibliographic highway, it is evident that some workers are doing themselves credit. One institution has gone so far as to gather together all the bricks stamped with the same name to erect pyramids among their scientific monuments.

(On the other hand, the name of collectors may be used, as a just reward for the hardships some of them

[1] SCIENCE, n. s., 71: 26–28, January 10, 1930.

must endure and as an encouragement to careful and thorough collecting. This would be the only exception to the worker-name rule, but it should be done only as a reward of real merit.)

The problem, then, is to eliminate vanity. There is no simpler way to bring this about than to outlaw the quotation of the author after a generic, specific, subspecific, varietal or mutational name. As a systematist, who has the privilege of inscribing his name after I do not know how many such scientific names, I would suggest to the International Committee on Zoological Nomenclature that they adopt a rule to the effect that the author's name shall appear only in synonymic catalogues or papers of rectification. Unfortunately for the adoption of radical ideas, the International Committee is composed, for the most part, of elderly systematists. If Professor Needham sees reason in the present suggestions, will he join me in the anti-authority crusade by omitting all authorities in his papers and encouraging others to do likewise? Editors should then be encouraged to drop from submitted manuscripts all scientific name authorities.

Some one will immediately raise objection on the grounds that one will be unable to tell to which of two species a paper refers: as *B. lata* of Smith (from England) or *B. lata* of Wang from China, at first thought to be identical, later found to be distinct. Such difficulties can always be raised by die-hards, but the intelligent, adaptable scientist is able to find a solution. In this particular example, as is well known to all taxonomists, *B. lata* Wang is renamed (not *B. wangi*), and ever after *B. lata* Wang needs not be referred to again, except in a catalogue of synonyms.

Here then we come to the morgue. Every family of plants and animals, on account of still-births, illegitimates and other anomalous and useless offspring of hasty or ignoble taxonomists, should have a synonymic catalogue for the reception of its useless progeny. To this catalogue all vain systematists may turn to count up their dead offspring or check up on the parent of legitimate, well-born children. Further, in a comprehensive systematic paper or report, it would be legitimate to quote the original description and two or three cardinal synonyms (as is done anyway), in six-point type, under the authorityless specific name. But why place the authority after the name and then in the synonymy or literary reference immediately beneath, except to gratify one's sense of vanity?

Coldly considered there is perhaps no more illogical procedure in our scientific nomenclature than this author notation. For usually on turning to the author's work, instead of finding a detailed description, a detailed set of figures and comparative data, one finds a few lines in Latin which might fit one of many species, or a fairly long description which dodges the differential characters. Far more valuable would be a reference to a monograph embodying enough data for ready identification or a figure which will give the reader a clear concept of the species in question without much expenditure of time. The old system undoubtedly had its place, but is it not time to break an old habit and adapt ourselves to a more rational, practical and less dangerous technique?

As a transitional step, after each scientific name one might place a numeral which refers to the paper of original description in the bibliography. And right here we come upon another of science's mooted points,[2] namely, what system of bibliographic reference shall be used, the numerical or egocentral? As scientists (impersonal beings) we can only use the numerical. Would this not tend to discourage the writing of too many papers? At least it would help to eliminate the personal element from our scientific contributions.

I fully sympathize with Professor Needham in his desire to simplify scientific nomenclature for the student, but to have to later introduce an advanced student to a vicious "fundamental" system of nomenclature is hardly satisfactory, while to remove the spice of vanity from the hyperconsciousness of some "scientists" would be striking at the root of the evil, with a little kick.

Perhaps there is no more vicious system than that of the botanist where two authorities appear or, worse yet, where the only authority is that of the upsetter of stability. As at present practiced, the authority of a plant name is not (or rarely) the original describer, but he who can, by any stretch of the systematists' art, place the species (or lower denomination) in a different genus. The result is an enormous increase in generic assignments, chiefly through the erection of new generic names. Thank God this system is foreign to the zoologist!

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A NOTE ON THE LIFE HISTORY OF THE LARGE AMERICAN FLUKE, FASCIOLA MAGNA (BASSI)

IN the course of an investigation of liver flukes in sheep and cattle in the United States, especially as regards the life histories and the intermediate hosts of the flukes, the writer made a survey of the Western and Southern states during the period from the

[2] SCIENCE, n. s., 71: 38–39, January 10, 1930.