

what I imagined to be the distant rumbling of a violent tornado, on which I spurred my steed, with a wish to gallop as fast as possible to a place of shelter; but it would not do, the animal knew better than I what was forthcoming, and instead of going faster, so nearly stopped that I remarked he placed one foot after another on the ground, with as much precaution as if walking on a smooth sheet of ice. I thought he had suddenly foundered, and, speaking to him, was on the point of dismounting and leading him, when he all of a sudden fell a-groaning piteously, hung his head, spread out his four legs as if to save himself from falling, and stood stock still, continuing to groan. I thought my horse was about to die, and would have sprung from his back had a minute more elapsed, but at that instant all the shrubs and trees began to move from their very roots, the ground rose and fell in successive furrows, like the ruffled waters of a lake, and I became bewildered in my ideas, as I too plainly discovered that all this awful commotion in nature was the result of an earthquake. * * * The fearful convulsion, however, lasted only a few minutes, and the heavens again brightened as quickly as they had become obscured; my horse brought his feet to their natural position, raised his head, and galloped off as if loose and frolicking without a rider. * * * Shock succeeded shock almost every day or night for several weeks, diminishing, however, so gradually as to dwindle away into mere vibrations of the earth. Strange to say, I for one became so accustomed to the feeling as rather to enjoy the fears manifested by others. * * * The earthquake produced more serious consequences in other places. Near New Madrid and for some distance on the Mississippi, the earth was rent asunder in several places, one or two islands sunk forever, and the inhabitants fled in dismay towards the eastern shore.

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U. S. GEOLOGICAL SURVEY.

SUGGESTIONS FOR FACILITATING THE WORK OF ZOOLOGISTS.

Two plans have occurred to me which would, I think, considerably lighten the work of zoologists if they could be carried out. As they do not seem wholly impracticable, I venture to present them for consideration and discussion.

1. No generic name is allowed to be used twice in zoology; so that when any name is used a second time, by inadvertence, it falls

as a homonym, and a substitute has to be proposed. As a matter of fact, the literature swarms with such homonyms, and we are constantly finding ourselves under the necessity of making changes because of them. Now that we have Scudder's 'Nomenclator' and Waterhouse's 'Index,' bringing the list of names proposed up to 1900, it ought to be quite possible to overhaul the whole series up to date, and make a list of *all* the homonyms known. If such a list were made in manuscript it might be divided into minor series according to the groups of animals, and each of these sent to a specialist in the group concerned. These specialists might then go carefully over the lists, seeking the advice and assistance of colleagues, and sift out all the names for which substitutes had already been proposed, and those which stood for invalid genera, leaving a residue of homonymous names for valid genera to be dealt with. This residue would have to be again examined to see whether any other names, hitherto placed in the synonymy, could be substituted, and when this could not be done new names should be proposed. This would involve a great deal of work, but it would get rid of the trouble from homonyms once for all, so far as the past is concerned; except, of course, those resulting from names overlooked in the indices. It would save us from the present sense of insecurity regarding names, and from a great deal of duplicated labor in looking up the names in use, lest they should be preoccupied. If the full list were published, it would also prevent the proposal of new substitutes for names which had already been suitably replaced on account of homonymy.

Such a work ought to be cooperative; because it could not be done well—even the first part, of matching names and detecting homonyms—by persons unfamiliar with scientific names; while it would not be reasonable to expect a working zoologist to devote his time to it to the exclusion of his original investigations. If each letter, in the first part of the work, were undertaken by one individual, it would not be long before it might be finished. For the later investigations, specialists would have to be allowed to take their

own time; but the groups first done could be published, without waiting for the others. The publication of the lists would be rather expensive, and would have to be undertaken by some institution. Whether the work itself could be done by volunteers, I do not know; but if any money could be obtained in payment for it, it would probably be easier to find workers.

2. At present new species of animals are described in all sorts of publications, in consequence of which it often becomes expensive or difficult to obtain the descriptions relating to any one group. It might be a very good plan if all descriptions of new species and varieties of North American animals were published (or republished) in a single series, on leaflets somewhat like those issued by the Biological Society of Washington. It might be so arranged that each leaflet should include only a single species or variety, or perhaps only those of a single genus, and each might be sold at a stated price. One could then subscribe for all the new descriptions pertaining to a certain genus, family or order, and receive them immediately upon publication. They could be bound up, when numerous enough, in any way that proved convenient; *e. g.*, all the new animals from Colorado, or all the new mammals from North America. The descriptions should, of course, be published promptly, and strictly in the order of their receipt at the editorial office. All descriptions of reputable authors should be accepted, but it would be appropriate to make certain rules, applicable to all; thus it might be required that the descriptions should be reasonably complete, or not conspicuously incomplete; that the exact locality and collector's name should be given, if ascertainable; and that comparison should be made with allied species. The same plan would be equally applicable to plants, of course. A special series of leaflets, issued with the others, might be devoted to the proposal of synonymy, or of new combinations. How much financial support such a plan would require I do not know; perhaps it would pay for itself, or nearly. It would probably not be necessary to take any special steps to persuade authors to send their new descriptions

for publication in the leaflets; the majority would doubtless soon do so as a matter of course, while those who did otherwise would find their descriptions reprinted in the regular series.

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SPECIAL ARTICLES.

A CARD INDEX STOCK LIST FOR USE IN UNIVERSITY DEPARTMENTS OF ORGANIC CHEMISTRY.

ONE of the administrative difficulties confronting the head of a university department of organic chemistry is the proper listing of the great variety of chemicals carried in stock, and constantly accumulating year by year as the result of the various investigations conducted in the laboratory. The troubles of the organic chemist in this respect are much greater than those of his inorganic colleague, for he must carry in stock not only about all the chemicals required by the inorganic chemist, but his own innumerable organic chemicals as well. In the larger universities, this accumulation of stock in the departments of organic chemistry amounts to many thousand lots, generally distributed in various rooms—the general stock rooms and closets, the main laboratory, the research rooms, the rooms of the officers of the department, the chemical museum, and elsewhere; in all kinds of containers, large and small, boxes, crocks, bottles, specimen tubes, and the like. To classify and list this mass of scattered material in such a way that an instructor can tell in a few moments whether a certain chemical is available in the department, and if so, in what amount and quality, and, further, to keep such a list constantly up to date, in spite of daily removal of stock and addition of new material, is not a simple task, as I think most of my colleagues will admit. And yet, without such a list more or less confusion is likely to result, and much valuable time will be wasted in pawing over a lot of bottles or specimen tubes in a vain search for a compound which is not in stock at all or can not be found, or, in other cases, for substances which, when found, prove to be too impure or too small in amount to be of any use. In this country, the failure to keep