annual value of £250. The usual tenure is for three years, but the trustees have power in exceptional cases to grant an extension for one year.

UNIVERSITY AND EDUCATIONAL NEWS

Mr. Jacob H. Schiff has given $100,000 to Cornell University to promote studies in German culture.

The million dollar fund for the further endowment of the Medical School of Western Reserve University has been completed.

De Pauw University has just brought to a successful close the campaign to raise $400,000 to meet the conditional gift of $100,000 from the Rockefeller Educational Board. The subscriptions total a little more than $440,000. This will make the productive endowment of the university something above $1,000,000.

On December 13 an anonymous gift of £30,000 was made to the University of London, to be devoted to the erection at University College of the buildings for the new school of architecture, resulting from the amalgamation of the architectural department of University College and King's College. Any balance is to be used for providing studios for the teaching of sculpture and the rearrangement of the school of fine art and for the department of applied statistics, including the laboratory of eugenics.

The Supreme Court of Illinois, on the final day of its fall term, failed to hand down a decision in the case involving the validity of the appropriation made by the legislature for the Medical School of the University of Illinois.

Following the custom of recent years, the United States government has sent officers of the army and navy to the Massachusetts Institute of Technology to receive instruction in electrical engineering. These are in addition to the graduates of the Naval Academy who are sent to take a course in naval architecture. This year the Naval Academy is represented by Ensign G. K. Calhoun, who was graduated from Annapolis in 1908. He has recently been stationed at the United States Naval Observatory at Washington where he has done considerable original work in wireless telegraphy, ship propulsion, gyroscopic compasses and chronometers. The army is represented by Captain Edward Canfield, West Point, 1901, and First Lieutenant F. Q. C. Gardner, West Point, 1904. Both officers have been connected with the Coast Artillery Corps, Captain Canfield being stationed at Puget Sound and Lieutenant Gardner at Fortress Monroe. Both men will pursue a special course in electrical engineering.

The council of the University of Paris has sanctioned a scheme for an exchange of students between the universities of Paris and London.

The Veterinary School of Lyons, France, said to be the oldest in the world, will celebrate the hundred and fiftieth anniversary of its foundation next May.

Dr. Clyde A. Duniway, of the University of Montana, has been informed by the Board of Control that he will not be reappointed as president of the university. It is understood that this action has been taken because President Duniway refused to appoint a local politician as dean of the law school of the university.

DISCUSSION AND CORRESPONDENCE

WHAT IS BIOLOGY AND WHAT IS A "BIOLOGICAL SURVEY"?

The occasion for the present note is found in the recent publication of "A Biological Survey of Colorado."[1] Probably most students of plants and animals have long wished that the word "biology" had never been coined. It is so often misunderstood by the non-scientific person. In the days of the old taxonomy and of the former rigid morphology there were few people really interested in both plants and animals. With the advent of ecology, and more recently of genetics, botanists and zoologists have been brought together and

[1] Issued as "North American Fauna," No. 33, as a publication of the Bureau of Biological Survey, Washington, 1911. The author, Merritt Carey, is stated to be "Assistant Biologist, Biological Survey."

it has seemed that perhaps there might be, after all, such a subject as "biology."

But now when it seemed that the word "biology" might really have a meaning there is issued from Washington this report, which even at very first glance belies its title. The real nature of the publication is indicated in the "Letter of Transmittal" in which it is stated that

> The report consists of three parts. The first characterizes the five life zones which traverse the state, defines their extent and limits and discusses their agricultural possibilities. The second consists of a complete list of the mammals of Colorado with brief notes on their habits, distribution and economic relations. The third is a list of the principal trees and shrubs of the state observed by the assistants of the biological survey during the progress of work in the state, with annotations as to their distribution and abundance.

Just why such an ambitious title as "A Biological Survey of Colorado" should be used for this report is nowhere stated and certainly is not apparent from internal evidence.

If this were the first study of the kind ever made in Colorado it would be a most excellent work. The material here presented, however new to the author, is very little of it new to science. Warren's "Mammals of Colorado," published in 1910, covers the mammals quite fully and numerous publications on ornithology and botany go far beyond the present report in most of the things mentioned in those branches. There are references to various publications on mammals and to one single botanical report, but apparently all the other information given by the author is from his own work. It is little short of marvelous that a young man with so little knowledge of the state, of its climate, its flora and its fauna has been able to prepare so good a report.

The discussion of life zones is conspicuous for that perfect independence of thought characteristic of those who know nothing of the writings and opinions of others. It would seem worth while, before writing about the native animals or plants of a state, to consult the published works of men of science resident in the state. Thus many laughable mistakes might be avoided.

It is a question worth considering whether the writer of "a biological survey" of any state would not do well to visit the museums within the state and make himself known to the naturalists who might help him in his work. The writer of "A Biological Survey of Colorado" according to his own account made his start from Boulder, but apparently did not take the trouble to visit the university there nor the museums in Denver, only 30 miles away.

From a reading of the report under consideration one would imagine that his was the first biological work ever undertaken in the state, save certain previous work on mammals, to which scant reference is made. Even if "a biological survey" means an account of one's own personal experiences in collecting mammals it would seem the part of candor to let the reader know that other men of science have at least looked upon the plants and animals of the region visited.

It is to be hoped that the next time the Bureau of Biological Survey at Washington authorizes the prosecution of "a biological survey" of any state, provision will be made to make the body of the report agree with the title. It would be interesting to know of naturalists generally whether they conceive "biology" to be synonymous with "mammalogy" and also to know whether an account of field trips made by one man is really "a biological survey" of a state.

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PHYSICAL LABORATORY INSTRUCTION

THE article in the December 15 number of SCIENCE, p. 823, by G. W. Stewart on "An Opportunity for the Spirit of Research in Laboratory Instruction in Physics," seems to be a move in the right direction. One aid towards securing this spirit of research is to be found in dispensing with detailed instruction sheets, and with apparatus that is set up and in adjustment. The best way in which to give instructions is in the form of a lecture,