

drift, the most fertile part of the plains; water is here plenty in small lakes. The peculiar drainage system of the Andean region is explained chiefly by the Pliocene depression and elevation of a previously dissected mountain range. Glacial erosion is not especially considered as contributing to the present topography.

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ZOOLOGICAL NOTES.

DURING the past year, L. Camerano has published (in *Atti della R. Accademia delle Scienze di Torino*, Vol. XXXV., and *Arch. Ital. de Biol.*, Vol. XXXIII., fasc. 2) papers on the 'somatic coefficient.' These are based on a plea made by Andres that ichthyologists and others express the proportion of parts of the body not in relation to any other convenient organ, as is often done, but rather in thousandths of the total body length. Thus, if x is the proportion to be expressed, l is the observed dimension, and L is the total length of the body, in millimeters, then, $x = \frac{1,000}{L} l$. The factor $\frac{10,000}{L}$

is the somatic coefficient and is constant for all organs of the body. Camerano makes the suggestion that the number 360, being readily divisible by more integers, is preferable to 1,000 and he publishes a convenient table of values of $\frac{360}{L}$ for every quarter unit from 1 to 360. It is to be hoped, however, that those who express the dimension of organs in multiples of the somatic coefficient will not fail to give also the absolute lengths of the organs, as these are of no less importance.

C. B. D.

IN describing to the Zoological Society of London, on January 15th, the collection of fishes brought home from Lakes Tanganyika and Kivu by the Tanganyika exploring expedition, under the leadership of Mr. J. E. S. Moore, Mr. G. A. Boulenger pointed out that the study of this important collection did not modify the conclusions embodied in his first report published in 1898. The exploration of Lake Kivu had thrown no light on the origin of the Tanganyikan fauna; the smaller lake proved to be very thinly populated with fishes, which all belonged to widely distributed genera,

the species showing a mixture of Nile and Tanganyika elements, with two that might prove to be endemic. The list of the fishes from the two lakes comprised 91 species, 74 of which had been named by the author. The collection now described consisted of examples of 50 species, 26 of which were new to science, 2 being made the types of additional genera of the family *Cichlidæ*.

A BILL ESTABLISHING A NATIONAL OBSERVATORY.

WE are now able to publish the text of the bill introduced into the Senate by Mr. Morgan on January 21st. The provisions seem to be all that could be asked, and it is to be hoped that men of science will unite in urging its passage. Personal letters to members of Congress and resolutions adopted by societies and institutions and forwarded to the Committee on Naval Affairs are the most effective way to advocate the measure. The bill is intended 'to organize the National Observatory of the United States' and reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the United States Naval Observatory shall hereafter be known as the National Observatory of the United States, and shall be governed by a Director thereof, who shall report directly to, and be under the supervision of, the Secretary of the Navy.

SECTION 2, That the Director of the National Observatory shall be an eminent astronomer, appointed by the President, by and with the advice and consent of the Senate, at a salary of five thousand dollars per annum, and shall be selected from the astronomers of the National Academy of Sciences unless, in the judgment of the President, an American astronomer of higher scientific and executive qualifications shall be found.

SECTION 3, That the Secretary of the Navy may detail for duty as astronomers at the National Observatory such professors of mathematics and other officers of the Navy as he shall deem necessary in the interests of the public service; but on and after the

passage of this Act no appointments shall be made of such professors unless required for service at the Naval Academy.

SECTION 4, That there shall be a Board of Visitors of the National Observatory, to consist of one Senator, one member of the House of Representatives, and three astronomers of eminence, to be selected by the Secretary of the Navy. The Board of Visitors shall make an annual visitation, or more frequent visitations, of the Observatory, advise with the Director thereof as to the scientific work to be prosecuted, and report to the Secretary of the Navy on the work and needs of the Observatory on or before the first day of November in each year. The members of the said Board may receive an allowance not exceeding ten dollars per day each during their actual presence in the City of Washington while engaged on the duty of the Board and their necessary traveling expenses; but no officer of the Government appointed on the Board shall receive any additional compensation for such duty above his actual expenses.

THE REORGANIZATION OF THE DEPARTMENT OF AGRICULTURE.

THE Agricultural Appropriation Bill, as presented to the Committee of the Whole of the House of Representatives, contained provisions for the reorganization of the Department of Agriculture, which we much regret were afterwards withdrawn, owing to the point of order being raised that new legislation had been attached to an appropriation bill. It is well-known that the salaries in the Department are too small, and that the Government is constantly losing the services of its trained scientific men. Thus Dr. Loew received a salary of \$1,800 in the Department of Agriculture, and has now accepted a position under the Japanese Government at a salary of \$7,000. The plan proposed by the Committee on Agriculture would have created four new bureaus, the chiefs of which would have received a salary of \$3,500 a year, and who would have been the chiefs of divisions who now receive \$2,500 a year, and

the salaries of the other scientific experts would have been increased by sums varying from \$200 to \$500 each. The total increase in salaries would have been \$26,000. In recommending this plan the Secretary of Agriculture, the Hon. James Wilson, wrote to the Chairman of the Committee on Agriculture, the Hon. J. W. Wadsworth, on January 15th, as follows:

Having gone over with care the proposed plan for the reorganization of the Department of Agriculture, I am pleased to state that it has my entire approval. The grouping together of scientists in kindred lines of work will enable us to bring to bear on each subject considered and on each undertaking before it is begun the experience of all the division chiefs interested, avoiding duplication of work, which quite frequently occurs under our present divisional system, and in that regard will enable us to economize.

The salaries as proposed are not in excess of what is paid to scientists doing like work in educational and experiment station institutions throughout the country, and are, in fact, much below the salaries paid by many institutions in the land that seek men of the greatest experience and highest attainments. The work now being carried on by this Department and the amount of money being expended by Congress justify the employment of the foremost scientists in every line.

We are not able to retain our best men at the present time. Other countries, as well as home institutions, take them away from us by offering more money than our statutory salaries. If it were possible for this Department to go to the country, through the Civil Service Commission, and get scientists well informed regarding the work we are doing for the farmers, the loss of a man now and again would not be so serious.

But this Department is compelled, in many of its divisions, to educate its own men. When they leave us, on account of getting better pay elsewhere, our work in some cases stops until new men can be trained.

I therefore sincerely hope that you will succeed in having the proposed rearrangement enacted into law. It will do much to facilitate our work, and I believe will in the end be economical.