

animal, when injected into a guinea-pig 24 hours before inoculation with several times the fatal dose, conferred immunity; 2cc. proved potent enough to save the lives of guinea-pigs when injected 48 hours after inoculation.

Sanarelli's work upon immunization was still in progress when the third memoir was written, and the outcome of his projected experiments in serum-therapy will be awaited with much interest.

EDWIN O. JORDAN.

LUDWIG RÜTIMEYER.

On the 25th of November, 1895, died at Basle Ludwig Rütimeyer, the last survivor of a long series of Swiss naturalists, the representatives of the classic period of natural science in this country. Now, two years after the death of this distinguished naturalist, his miscellaneous papers appear in a form capable of attracting the attention of the scientific world.* Rütimeyer's numerous publications, which for a long time chiefly adorned the 'Abhandlungen der schweizerischen paläontologischen Gesellschaft' and the 'Denkschriften der schweizerischen naturforschenden Gesellschaft,' could not be reproduced, but the smaller occasional lectures and writings, which, owing to the astonishing universality of Rütimeyer's researches and studies, deal with questions of zoology and anthropology as well as of geology and geography, are here collected in two volumes. It is well known what a high position the leader of European paleontology, von Zittel, has assigned, for example, to Rütimeyer's paper on the geographical and geological distribution of animals. Whoever shall read this and the similar papers made accessible by this edition will be surprised by the perspicacity of the conclusions and the abundance of openings in every direction of

natural philosophy, the exceeding originality and the immense knowledge of details which characterized the man, to whom in the last decades, along with Sir Richard Owen, Vertebrate Paleontology in Europe is most indebted. Among the fundamental questions of zoology we find treated the principles of natural history, the boundaries of animal life, the phylogeny of the vertebrate skeleton, the changes in animal life in Switzerland since the presence of man, the modality of progress in the organic world, general considerations on the seccionic structure of Europe, history of glacier studies in Switzerland, three essays on the Bretagne and addresses in the memory of L. Agassiz, Ch. Darwin, P. Merian and B. Studer, who were in intimate relations with Rütimeyer. The first volume is introduced by an autobiographical sketch, which may give to American naturalists an idea of the development, the many suggestions and difficulties of a Swiss who devoted his life to natural philosophy.

RUD. BURCKHARDT.

BASEL, December 1, 1897.

CURRENT NOTES ON PHYSIOGRAPHY.*

THE GLACIAL LAKE AGASSIZ.

As the Monographs by Gilbert and Russell on the extinct Lakes Bonneville and Lahontan are the classics with regard to basins from which former bodies of water have been withdrawn by evaporation, so

*In SCIENCE for December 3d it was implied that the recent report of the Maryland Geological Survey had neglected possible relations with the schools of the State and devoted its physiographic studies to the interests of 'those who may seek a home in Maryland.' This error was due to my eye having caught the heading 'Study of the Pysiographic Features of the State' (p. 40), in which only the immigrant is referred to as taking advantage of the results; while I failed to note, under the heading 'Preparation of Final Reports,' a very explicit mention of their educational significance. "It is most desirable that the youth of Maryland should grow up with a knowledge of the country in which they live, and be

* 'Gesammelte Schriften.' Basle, Georg et Cie. 1898.