

SCIENCE IN THE ARGENTINE REPUBLIC

The Argentine Republic. Written in German by Richard Napp, assisted by several Fellow-writers, for the Central Argentine Commission on the Centenary Exhibition at Philadelphia. With several maps. (Buenos Ayres, 1876.)

Physikalische Beschreibung der argentinischen Republik, nach eigenen und den vorhandenen fremden Beobachtungen entworfen. Von Dr. Hermann Burmeister. Erster Band: die Geschichte der Entdeckung und die geographische Skizze des Landes enthaltend. (Buenos Aires, 1875.)

Acta de la Academia Nacional de Ciencias Exactas existente en la Universidad de Córdoba. Tomo I. (Buenos Aires, 1875.)

Los Caballos Fósiles de la Pampa Argentina. Descriptos por Dr. Hermann Burmeister, Director del Museo Público de Buenos Aires. Obra ejecutada por orden del Superior Gobierno de la Provincia de Buenos Aires, para ser presentada en la Exposición de Filadelfia. Con viii. Láminas Litografiadas. (Buenos Aires, 1875.)

ON several previous occasions¹ we have alluded to the excellent work in science accomplished by Prof. Burmeister, or under his supervision, since that eminent German naturalist took up his residence in the Argentine Republic. A batch of books, which has now, we regret to say, been lying before us for some time, testifies to his unabated activity in the good cause, and requires a few words of acknowledgment and explanation. The first of these, originally written in German by Richard Napp, but translated for the benefit of the Anglo-Americans, gives a general physical and commercial account of the Argentine Republic, prepared on the occasion of the Centenary Exhibition at Philadelphia. It is, of course, rather superficial, as is usually the case with such essays, but contains a good deal of information, and will be useful to the many Angl-Saxons who are now settling in various parts of the country of which it treats.

Next we have the first volume of a complete physical description of the Argentine Republic, by Dr. Burmeister himself, which when finished will, as we understand from the introduction, contain a much more complete account of this extensive territory and its products than any work that has yet appeared. The present portion of it gives us the history of the discovery of the country and an account of its physical geography. Subsequent volumes will contain a general *résumé* of its natural history and geology. A French edition as well as a German will be issued, and a folio atlas will contain the necessary illustrations.

The third work on our list is the first volume of the "Acta" of the National Academy of Sciences of Córdoba, which, as we have explained to our readers on former occasions, has been recently re-constituted under Dr. Burmeister's directorship. It contains contributions to science by some of the members of the new professoriate, the organisation of which has caused our excellent friend so much embarrassment. Dr. Stelzner and Dr. Brachebusch treat of various points in the geology and mineralogy of the Argentine Republic. Dr. D. C. Berg contributes an essay on the Lepidoptera of Pata-

gonia, based upon collections made during an excursion to that country in 1874.

Lastly, we have an excellent memoir by Dr. Burmeister on the Fossil Horses of the Pampas formation written in Spanish and German, and prepared, as it appears, on the occasion of the International Exhibition of Philadelphia. Eight well-executed lithographic plates illustrate this important work, which is executed in the same style as other excellent essays of the indefatigable author that we have already noticed on former occasions. An Appendix contains a complete list of the mammals of the Quaternary Pampian formation, remains of which are contained in the Public Museum of Buenos Ayres. From this it appears that between fifty and sixty species are represented more or less perfectly in this unparalleled series, amongst which are many specimens that, in spite of the richness of our own palæontological collections, might well excite the envy of Prof. Owen and Mr. Waterhouse.

OUR BOOK SHELF

United States Commission of Fish and Fisheries. Part III.—Report of the Commission for 1873-74 and 1874-75. (Washington Government Printing-office, 1876.)

THIS volume is quite as interesting as any of those which have preceded it, whilst the amount of reliable information it brings to a focus, not only regarding the fish and fisheries of the United States, but of the fisheries of Great Britain, Sweden, Prussia, Holland, France, and Russia, is remarkable; nor are the historical observations on the condition of the fisheries among the ancient Greeks and Romans, and on their modes of salting and pickling fish less interesting. The volume is throughout so rich in statistics and details of piscicultural labour that we feel embarrassed as to what part of it to notice first; to give a detailed account of the contents is simply impossible in anything like the space we can afford. As readers of NATURE may be aware, the present volume is one of a series having for its object an exposition of the present state of the American fisheries, and in particular showing the extent to which the seas and waters of the United States have been over-fished, and how far the systems of artificial fish culture at present in vogue provide a remedy for the reckless spoliation of the waters which has been going on for the last twenty years. Familiar as we are with the figures of fish-culture, so far as they are locally applicable to British enterprise, and whether in respect of oysters or salmon, any details we can give are utterly dwarfed by the fabulous-looking figures applicable to what has been achieved in America. The young salmon which have been thrown into the River Tay from the Stormontfield hatching-ponds since the beginning of the experiments in 1853 up to the present time, will not be equal to the operations of one season on the Upper Sacramento; in 1875 the salmon eggs collected numbered 11,000,000, making a bulk of eighty bushels, and weighing nearly ten tons! These eggs, so carefully packed that only a small percentage was wasted, have been largely distributed over America, and will doubtless ultimately add largely to the fish supply of the United States.

Another fish which has been subjected to the manipulations of the pisciculturists on a positively gigantic scale is the shad, *Alosa sapidissima*, and the fish locally known as the "alewife," *Pomolobus pseudo-harengus*. These fishes were at one time (forty years since) exceedingly abundant in the Potomac river, so much so that as many as 22,500,000 shad and 750,000,000 alewife were captured in six weeks' time. Only a small percentage of

¹ NATURE, vol. iii. p. 282; vol. vii. p. 240; and vol. xii. p. 145.